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ABSTRACT

THIS BULLETIN INCLUDES REPORTS OF RESEARCH IN PROGRESS OR RECENTLY COMPLETED. THE FIRST SECTION CONTAINS ABSTRACTS. THESE ARE DIVIDED INTO EIGHT SECTIONS: (1) LONG-TERM RESEARCH, (2) GROWTH AND DEVELOPMENT, (3) SPECIAL GROUPS OF CHILDREN, (4) THE CHILD IN THE FAMILY, (5) SOCIOECONOMIC AND CULTURAL FACTORS, (6) EDUCATIONAL FACTORS AND SERVICES, (7) SOCIAL SERVICES, AND (8) HEALTH SERVICES. THE SECOND SECTION CONSISTS OF INDEXES ON ORGANIZATIONS, INVESTIGATORS, AND SUBJECTS. (KJ)

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bulletin no. 24

RESEARCH relating to CHILDREN

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
SOCIAL and REHABILITATION SERVICE
children's bureau
1969

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RESEARCH relating to CHILDREN

Bulletin 24

Current and recently completed studies on

- GROWTH and DEVELOPMENT
- PERSONALITY and ADJUSTMENT
- EDUCATIONAL PROCESS
- EXCEPTIONAL CHILDREN
- THE CHILD in the FAMILY
- SOCIOECONOMIC and CULTURAL FACTORS
- SOCIAL SERVICES
- HEALTH SERVICES

September 1968-March 1969

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FOREWORD

This Bulletin, like previous issues, includes reports of research in progress or recently completed. With the exception of the long-term research, it does not report again studies included in Bulletins 3 through 23 even though they may still be continuing. This issue, therefore, does not reflect all research relating to children in a given period but only that which was first reported to the Clearinghouse September 1968 through March 1969.

The Clearinghouse has only such information about the studies as the abstracts provide. Publication references and plans are given by some of the investigators but the Clearinghouse does not maintain bibliographic information on published reports of the studies. The reader who wishes to obtain further details about any of the projects reported should check professional journals in the appropriate field or write directly to the investigator.

For the Clearinghouse, I wish to thank those who have submitted reports on their own projects and those who have told us of other studies, and to acknowledge the valuable assistance of the Science Information Exchange, and the foundations which provide us with information about their research grants.

Jule M Sugarman

Jule M. Sugarman
Acting Chief, Children's Bureau
SOCIAL AND REHABILITATION SERVICE

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To Research Investigators:

This publication is only as complete as you are willing to make it. Page **143** is a form for letting us know of other investigators who are working in the field. Page **140** is a form for reporting your own current research. Please let us hear from you.

Clearinghouse for Research in Child Life

LONG-TERM RESEARCH

Note: The reports in this section concern research programs which are more or less continuous.

24-AA-1 THE CHILD RESEARCH COUNCIL

Purpose: To conduct life-span investigations of growth, development, and adaptation of healthy volunteer subjects.
Subjects: 215 healthy middle and upper-middle class volunteers from Denver, ages 1 year to 48 years.
Methods: Current operation is limited to analysis of data collected since 1930 in the areas of physical growth, roentgenographic studies of growth, nutritional intakes, health records, and selected areas of biochemical and functional development. Data are being organized on electronic tape for computer analysis. Projected activity in the coming year includes analysis and publication.
Duration: 1930-continuing.
Investigator(s): Robert W. McCammon, M.D., Director, Virginia A. Beal, M.P.H., Nutritionist, Edith Boyd, M.D., Pediatrician, Charlotte Hansman, M.D., Anthropometrist and Assistant in Roentgenology, Marion M. Maresh, M.D., Roentgenologist, Aldula Meyers, Ph.D., Hematologist, and Virginia E. Trevorrow, Ph.D., Biochemist, Child Research Council, 4200 E. Ninth Ave., Denver, Colo. 80220.
Cooperating group(s): University of Colorado Medical Center; Commonwealth Fund; National Dairy Council; Gerber Products Co.; Nutrition Foundation; Phipps Foundation; National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Reprint lists available from Dr. McCammon.

24-AA-2 ANALYSIS AND EVALUATION OF DATA FROM THE LONGITUDINAL STUDY OF CHILD HEALTH AND DEVELOPMENT BASED UPON MULTIDISCIPLINE AND PERIODIC OBSERVATIONS OF INDIVIDUAL CHILDREN FROM BIRTH TO 18 YEARS

Duration: 1930-continuing.
Investigator(s): Research has been discontinued, but the analyses of data and preparation of reports are being continued by individuals under the direction of Robert B. Reed, Ph.D., Professor and Head, Department of Biostatistics, Harvard School of Public Health, Boston, Mass. 02115.

24-AA-3 LONGITUDINAL STUDY OF CHILD GROWTH AND DEVELOPMENT

Purpose: Program consists of study of adult personality, adjustment, and aging processes of individuals whose health, growth, personality development, and environment have been studied since birth. It included a study of the aging processes of their parents in relation to physical and biochemical measures made earlier. It will include studies of: parental childrearing attitudes and practices of two generations in the same families; constancy of autonomic response patterns to stress from childhood to young adulthood and their relationship to psychosomatic disorders in adulthood; blood lipids in relationship to body composition and change in composition.
Investigator(s): Lester W. Sontag, M.D., Director, Fels Research Institute for the Study of Human Development, Antioch College, Yellow Springs, Ohio 45387.
Cooperating group(s): Public Health Service, U. S. Department of Health, Education, and Welfare.

24-AA-4 LONGITUDINAL CROSS-CULTURAL STUDY OF HUMAN DEVELOPMENT

Purpose: To observe the long-term effects of environment upon growth and health, that is, the influence of environmental factors upon physical and mental development, and the elucidation of their mode of action and interaction with genetic endowment.
Subjects: Several hundred males followed from prepuberty, all with four grandparents from the same limited geographical zone of southern Italy but now living in the markedly different cultures of Boston, Rome, and Palermo; other groups of 100 girls and several hundred boys in Florence, Italy and 200 girls in Boston.
Methods: Repeated medical, anthropometric, and psychological examinations together with family interviews (with evaluation of childrearing practices), nutrition, and sociocultural data.
Findings: Reported in numerous articles in American and European journals. Current work under analysis includes cross-cultural study of moral values, studies of biological age and its estimation, estimation of socioeconomic status across cultures, blood groups and temperament, and changing hemoglobin values in adolescent males. Work involving further and continuing data collection includes prediction of growth variables, cross-cultural study of creativity and its environmental determinants, a study of left-handed subjects in the relatively "permissive" and "intolerant" cultures of the United States and Italy, and an analysis of menstrual symptoms in both cultures.
Duration: 1956-1968.
Investigator(s): Harben Boutourline Young, M.D., Research Associate in Human Growth and Development, Harvard School of Public Health, Boston, Mass. 02115; present address: Harvard Florence Research Project, Via Venezia 10, Florence, Italy.

Cooperating group(s): Grant Foundation; Wenner Gren Foundation; Olivetti Corporation; Universities of Florence, Rome, and Palermo.
Publications: *Perceptual and Motor Skills* 23:35-40, 1966; *Bulletin of the International Epidemiological Association* 12:1936, 1965; *American Journal of Diseases of Children* 106:568-577, 1963; papers and other articles; one book planned, another possible.

24-AA-5 BIOLOGIC AND ENVIRONMENTAL FACTORS IN CHILD DEVELOPMENT

Purpose: To investigate the relationship of biologic, genetic, and environmental factors in the parents--including events during pregnancy, labor, and delivery--to normal and abnormal development of offspring. Expected byproducts of investigation are relationships of these factors to pregnancy wastage in the form of early fetal death, perinatal mortality, infant and childhood mortality, and estimates of incidence of different types of abnormalities. In addition, detailed growth curves for children from birth to six years of age will be derived on a longitudinal basis, as will estimates of illnesses and injuries in infancy and the preschool child.
Subjects: Members of the Kaiser Foundation Health Plan--a prepaid medical care program--who reside in the San Francisco-East Bay Area.
Methods: Study is of a prospective, longitudinal type for both mother and child. Observations are made on the gravidas in the Department of Obstetrics and Gynecology, and on the children in the Pediatric Department, and are supplemented by special interviews and laboratory examinations. Physicians' observations are systematized and made more uniform. Special efforts are made to obtain information on members of study who do not return to the plan for medical care.
Duration: July 1959-indefinite.
Investigator(s): Jacob Yerushalmy, Ph.D., Professor of Biostatistics, University of California School of Public Health, Berkeley; Stephen Thomas, M.D., Director, Department of Obstetrics and Gynecology, and Edgar Schoen, M.D., Director, Department of Pediatrics, Kaiser Foundation Hospital, Oakland, Calif.
Cooperating group(s): Permanente Medical Group; Kaiser Foundation Research Institute.
Publications: *Journal of Pediatrics* 71:2:164-172, August 1967; *Pediatrics* 39:940-941, 1967; *American Journal of Obstetrics and Gynecology* 88:4:505-513, February 15, 1964; other articles.

24-AA-6 THE BERKELEY (CALIFORNIA) GROWTH STUDY

Purpose: A study of the mental and physical growth of normally healthy persons from birth in 1928-1929 to the present.
Subjects: 60 full-term, healthy newborns, born in Berkeley, Calif. hospitals of white, English-speaking parents, if parents were interested--a somewhat selected above-average group; 140 offspring of these subjects, age range from a few months to about 20 years, seen irregularly, but same data (appropriate for age) collected that were collected for their parents.
Methods: Tests of mental and motor development; pediatric examination; interviews at frequent intervals during growth beginning in first week of life. At all visits, inquiries made concerning current health and recent illnesses. Anthropometrics, body photographs, and skeletal X-rays taken at most ages. Socioeconomic data available. Adult records include mental tests, physical examinations, anthropometrics, and current

status interview. Studies of physical aspects of growth include analyses comparing health histories with physical growth and with skeletal maturation. Some parent-child relations in susceptibility to illness could be studied. Emotional and other personality variables studied for consistency, and in various interrelations with maternal behavior in infancy, birth histories, socioeconomic status, intellectual and physical growth.
Duration: 1928-continuing.
Investigator(s): Nancy Bayley, Ph.D., and Dorothy H. Eichorn, Ph.D., Research Psychologists, Institute of Human Development, University of California, Berkeley, Calif. 94720.
Publications: American Psychologist 23:1:1-17, 1968; Monograph of the Society for Research in Child Development 28, 1963; Growth Diagnosis. Chicago: University of Chicago Press, 1959; others.

24-AA-7 MEDFORD, OREGON BOYS' GROWTH STUDY

Purpose: To construct physical and motor growth curves of boys 7 to 18 years of age; to relate physical and motor traits to physiological maturity, physique type, sociopersonal adjustment, interests, and scholastic aptitude and achievement.
Subjects: Cross-sectional samples: 40 boys at each age 9 through 15 years; longitudinal samples: 100 boys at ages 7, 9, 12, and 15 years; tested annually to 18 years.
Methods: Construction of growth and growth acceleration needs; extent of individual differences; contrasting extreme groups on various tests; zero-order, partial, and multiple correlations; factor analysis; multiple regression equations; special studies of athletes; and profile charts of outstanding athletes.
Findings: Contained in 62 master's and doctor's theses to date.
Duration: October 1955-June 1968.
Investigator(s): H. Harrison Clarke, Ed.D., Research Professor of Physical Education, School of Health, Physical Education, and Recreation, University of Oregon, Eugene, Ore. 97403.
Cooperating group(s): Oregon State Education Department; Southern Oregon College; Office of Scientific and Scholarly Affairs, University of Oregon Graduate School; Athletic Institute, Chicago.
Publications: Series of brochures planned, to be published by Prentice-Hall, Inc., Englewood Cliffs, N. J.

24-AA-8 GROWTH OF PSYCHOPHYSIOLOGICAL PATTERNS IN INFANCY

Purpose: To investigate the origins and course of development of individual differences in neonates. (See Research Relating to Children, Bull. No. 21-AA-8.)
Subjects: Normal, healthy full-term babies, 2 to 5 days old, born at Bronx Municipal Hospital Center.
Methods: A neonatal behavioral profile established in prior studies in this laboratory will be used. This profile includes behavioral and heart rate ratings on excitation, soothing, feeding, sleep, and non-stimulus periods of observation. Neonates will be followed at two weeks, one, two, three, and four months of age to measure the stability of early-appearing traits and their relation to later behaviors.
Findings: Data will be analyzed with respect to stability of early-appearing behaviors and relationship between neonatal behavior and maternal and birth history.

Duration: 1966-continuing.
Investigator(s): Wagner H. Bridger, M.D., Associate Professor of Psychiatry, and Beverly Birns, Ph.D., Assistant Professor of Psychology, Albert Einstein College of Medicine, Yeshiva University, Bronx, N. Y. 10461.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: In Early Experience and Behavior, Grant Newton and Seymour Levine (Eds.), in press, 1968; Psychosomatic Medicine 28:316, 1966; Child Development, September 1965; others.

24-AA-9 PHILADELPHIA CENTER FOR RESEARCH IN CHILD GROWTH

Purpose: To develop standards and norms of physical growth and development of normal, healthy children of the Philadelphia area.
Subjects: White and Negro children, male and female. Data are longitudinal (usually annual), based on two major samples: birth to 7 years, and 7 to 17 years. Cephalometric (measurement of head, face, jaws) and somatometric (trunk, limbs) standards of second group (white, Negro) are already available; those of first group (white only) will be within the year.
Methods: Cephalometry and somatometry. Measurements are linear, transverse, sagittal, circumferential, skin thickness (via skin calipers), X-ray films of left hand (routinely) and of upper arm or lower leg (reduced number of cases); also of head and face in norma laterales sinistra and norma faciales (roentgenographic cephalometry). Dental models are taken in most cases. Histories secured are: (1) familial in terms of ethnic background and socioeconomic status; (2) medical (illness) and dental (occlusion, dental stage, oral habits); (3) genetic, in terms of the familial occurrence of trait(s) being considered. All data may be referred to several age categories: (1) chronological age (C.A.); (2) dental or eruptive age (D.A.); (3) skeletal or biological age (S.A.). All data have been put on microfilm, coded, and stored in computer memory. (1) School Series: initially based on 600 normal, healthy white school children from five Philadelphia schools, 6 to 12 years of age (ultimately followed to 22 schools). These children have provided the core data upon which our 7- to 17-year standards are based. (2) Negro American Series: based on the semiannual study of some 500 elementary school children. These children have provided the core data upon which our 7- to 17-year standards are based. (3) Orthodontic Series: now numbering some 2,700 children from the Orthodontic Clinics of the University of Pennsylvania (2,200) and the Children's Hospital (500). All of these children have been followed through their treatment course (two to four years, average). On about 10 percent of them there are posttreatment followup studies. (4) Cleft Palate Series: in cooperation with the Children's Hospital. These data are, for the most part, single preoperative roentgenographic cephalometric, plus selected somatometry (H, W, shoulder B, chest B and D, hip B, etc.). There are some 600 such records; in about 10 percent there are followup data. (5) Cooley's Anemia Series: based on some 120 children. Measurements, X-ray films, familio-genetic histories, and therapeutic treatment. Data are longitudinal, on an annual basis. (6) Endocrine and Chromosomal Series: seen on a referral basis from Children's Hospital. Data are followup, though sporadically and irregularly so.
Investigator(s): Wilton M. Krogman, Ph.D., LL.D., Director, Philadelphia Center for Research in Child Growth, and Professor and Chairman; and Francis E. Johnston, Ph.D., Assistant Director, The Center, and Associate Professor of Anthropology, Department of Physical Anthropology; Geoffrey F. Walker, B.D.S., Director of the Philadelphia Center for

Craniofacial Biology, and Research Associate in Orthodontics, Department of Orthodontics, Division of Graduate Medicine, University of Pennsylvania, Philadelphia, Pa. 19146.
Cooperating group(s): Children's Hospital of Philadelphia; Philadelphia Board of Public Education; School System, Archdiocese of Philadelphia; National Institute of Dental Research and National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-AA-10 GROWTH RESEARCH UNIT

Purpose: To gain insight into critical factors influencing growth patterns of all children by observing the growth and development of deviates, especially those with pathological diagnoses which have been medically documented.
Subjects: Children with congenital cardiac lesions, and children and adolescents with significant deviations of physical, neurological, and behavioral development.
Methods: Standard anthropometric measures.
Duration: 1929-1969.
Investigator(s): Leona M. Bayer, M.D., Cochairman, Youth Clinic, Research Associate, Heart Center, Pacific Medical Center, San Francisco 94115, and Adjunct Clinical Associate Professor of Medicine, Stanford University, Stanford 94305; Ernst Wolff, M.D., Pediatrician-Coordinator, Service for Developmentally Handicapped Children; and Saul J. Robinson, M.D., Clinical Professor of Pediatrics, University of California Medical Center, San Francisco, Calif. 94122.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: American Journal of Diseases of Children 117:564-572, May 1969; Child Development 40:1:315-346, March 1969; Journal of Pediatrics 62:5:631-645, May 1963; Journal of Clinical Endocrinology and Metabolism 22:1127-1129, November 1962.

24-AA-11 LONGITUDINAL STUDY OF DENTOFACIAL, SKELETAL, PHYSICAL GROWTH, AND NUTRITION OF CHILDREN

Purpose: To study the dentofacial growth of children, standards of nutrition, caries increment as related to nutrition, assessment and skeletal age as related to facial growth, variations in physique and its effect on dentofacial growth. Twins are also being studied to determine heritable traits.
Subjects: 400 children, including 40 pairs of twins, ages 3 to 18 years, who have been observed for periods of 3 to 10 years.
Methods: Cephalograms, hand, wrist, and calf X-rays, intraoral X-rays, study casts, anthropometric measurements, photographs, oral examination, and one-week food diary. Children are examined every six months until 14 years of age.
Duration: 1950-continuing.
Investigator(s): Bhim S. Savara, D.M.D., M.S., Professor and Chairman, Child Study Clinic, Dental School, University of Oregon, Portland, Ore. 97201.
Cooperating group(s): Oregon State Board of Dental Examiners; Tektronix Foundation, Inc.; Medical Research Foundation of Oregon; National Dairy Council; National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Growth 31, 1967; Human Biology, May 1967; Archives of Oral Biology 12, 1967; others.

24-AA-12 RADIOGRAPHIC STANDARDS OF REFERENCE FOR SKELETAL DEVELOPMENT OF CHILDREN. REVISIONS AND NEW STANDARDS

Purpose: To develop radiographic standards of reference for skeletal development of children. See Research Relating to Children, Bull. No. 21-AA-12.)
Methods: Between 1937 and 1962 series of films of approximately 1,000 healthy Cleveland children were used to prepare standards for the hand and wrist, the knee, and the foot and ankle. These standards display a modal (moderate) rate of development of each bone in these three regions of the growing skeleton as they appear at regular intervals between birth and adulthood.
Investigator(s): S. Idell Pyle, Ph.D., Research Associate in Anatomy, Case Western Reserve University School of Medicine, Cleveland, Ohio 44106; William W. Greulich, Ph.D., Research Biologist, National Institute of Child Health and Human Development, Bethesda, Md. 20014, and staff of the National Center for Health Statistics involved in the National Health Survey, Public Health Service, U. S. Department of Health, Education, and Welfare, Washington, D. C. 20201.
Cooperating group(s): Bolton Study (Cleveland); Department of Maternal and Child Health, Harvard University School of Public Health.
Publications: Radiographic Atlas of Skeletal Development of the Knee, A Standard of Reference, 2nd ed., S. Idell Pyle and Normand L. Hoerr. Springfield, Ill.: Charles C. Thomas, 1969; in 1965 a special standard of reference for the hand and wrist of children ages 5 to 17 was selected from the standard plates included in the 1959 Greulich and Pyle atlas for use in conjunction with the National Health Survey of American Children, unpublished.

24-AA-13 COLLABORATIVE STUDIES IN CEREBRAL PALSY AND OTHER NEUROLOGICAL AND SENSORY DISORDERS OF INFANCY AND CHILDHOOD

Purpose: To investigate factors and conditions affecting parents: (1) conditions of pregnancy itself, such as infections, trauma, bleeding, drugs, and progress of labor; (2) environmental factors influencing mother, such as social and economic conditions, emotional stress, and medical care; (3) biological factors in parents, such as age, parity, medical and reproductive history, and immunologic characteristics; (4) genetic background of parents. To investigate in the offspring: disorders of the nervous system of all products of conception at time of delivery or appearing during infancy or early childhood, including cerebral palsy, mental subnormality, behavioral disorders, etc. A detailed investigation of the independent variables will be directed toward the reevaluation of the effect of factors already suspected, the elucidation of the mechanism through which these factors are operative, and the discovery of factors neither presently known nor suspected.
Subjects: Approximately 8,000 live births per year from collaborating institutions for five years. Offspring followed until school age.
Methods: Analysis of pooled information collected in a uniform way in a number of medical centers throughout the country from women studied during pregnancy and from their offspring followed throughout infancy and early childhood. Intensive study of limited number of cases; less intensive study of as many damaged children and abnormal pregnancies as possible.
Duration: 1956-continuing.
Investigator(s): Heinz W. Berendes, M.D., National Institute of Neurological Diseases and Stroke, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Md. 20014. Collaborating

institutions: Charity Hospital, New Orleans, La.; Johns Hopkins University School of Medicine, Baltimore, Md.; Boston Lying-In Hospital and Children's Medical Center, Boston, Mass.; University of Minnesota Medical School, Minneapolis, Minn.; Columbia-Presbyterian Medical Center and New York Medical College, New York, N. Y.; University of Buffalo, Buffalo, N. Y.; University of Oregon Medical School, Portland, Ore.; Children's Hospital of Philadelphia and Pennsylvania Hospital, Philadelphia, Pa.; Brown University, Providence, R. I.; University of Tennessee Medical School, Memphis, Tenn.; Medical College of Virginia, Richmond, Va. Publications: Bibliography available from Dr. Berendes; in *Research Methodology and Needs in Perinatal Studies*, Chapters 5 and 6, S. S. Chipman, A. M. Lilienfeld, B. G. Greenberg, and J. F. Donnelly (Eds.). Springfield, Ill.: Charles C. Thomas, 1966; *Summary of Progress in Collaborative Perinatal Research (A Nationwide Mother-Child Study)*, Public Health Service Research Profile No. 9, PHSP No. 1161, 1964.

24-AA-14 METHODS IN CHARACTER DEVELOPMENT

Purpose: To develop more effective methods in character development in cooperation with families and character-training agencies. (Character is defined in terms of three dimensions: philosophy of values, breadth of social vision, and strength of purpose.)
Subjects: Children and families throughout the United States. These are in churches, YMCA's, and schools, and participate as individual families.
Methods: The methods of development are based on action research, in which the participants cooperate with the laboratory, using methods of coscientist research. Open-ended reports on research goals constitute the basic body of research data. An analysis of these data serves as the basis for the development of new procedures and for the scientific reports which are published concerning it.
Findings: Reports have been prepared concerning hypotheses being tested in the home and character-building agencies. Most of the findings relate to the home, learning, decisionmaking, and methods for character development, plus descriptions of age-level potentials, especially for decisionmaking.
Duration: 1935-continuing.
Investigator(s): Ernest M. Ligon, Ph.D., Director, Leona J. Smith, Ph.D., Research Associate, and staff, Union College Character Research Project, 10 Nott Terrace, Schenectady, N. Y. 12308.
Cooperating group(s): Lilly Endowment, Inc.
Publications: *Character Potential: A Record of Research*; *How to Stand Up for What You Believe*, Herbert J. Detweiler. New York: Association Press, 1966; *The Marriage Climate*, Ernest M. Ligon and Leona J. Smith. St. Louis, Mo.: Bethany Press, 1963; others.

24-AA-15 LONGITUDINAL STUDIES OF CHILDREN WITH CRANIOFACIAL BIRTH DEFECTS

Purpose: To study the epidemiology, genetics, morphology, physiology, and postnatal development of congenitally deformed craniofacial structures.
Subjects: 2,000 subjects.
Methods: Most subjects were initially studied as infants. Procedures include roentgencephalometry and tomography, dental casts, photographs, and speech and hearing, psychosocial, and pediatric evaluations.
Duration: 1949-continuing.

Investigator(s): Samuel Pruzansky, D.D.S., Director, Center for Craniofacial Anomalies, University of Illinois Medical Center, Chicago, Ill. 60612.
Cooperating group(s): Illinois State Pediatric Institute; National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Multiple articles in journals of dentistry, medicine, public health, speech and hearing, psychology, and research; list of publications available from Dr. Pruzansky.

24-AA-16 STUDY OF INFANT TWIN PERSONALITY DEVELOPMENT

Purpose: To gain further understanding of normal personality development of identical twins, and of the interaction between environmental and constitutional factors; specifically, to define personality differences in identical twins and to find explanations for these differences.
Subjects: Infant monozygotic twins in an intact family.
Methods: When a diagnosis of multiple pregnancy is made, and with the permission of parents and obstetrician, a family expecting twins is contacted for the study. One or two prenatal interviews are held with the parents, and a researcher is present at the delivery to make direct observations of the delivery process and the earliest postnatal period for each twin. Zygosity is determined by studies on the placenta and cord blood. Twins are observed in the pediatric nursery and given a neurological examination, which is repeated at age one. Home visits are made several times a year and involve observation of the twins, questioning of the parents about the twins' growth and development and their own reactions to the twins. Particular attention is paid to those interacting physiological and psychological features which tend toward further differentiation and those which favor the maintenance of similarity between identical twins. The way in which nongenetic constitutional factors influence the family environment as experienced by each twin will be carefully noted.
Duration: January 1967-1980.
Investigator(s): William Pollin, M.D., Chief, James Stabenau, M.D., Martin G. Allen, M.D., and Axel Hoffer, M.D., Clinical Associates, Section on Twin and Sibling Studies, Adult Psychiatry Branch, National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Md. 20014.

GROWTH AND DEVELOPMENT

General

24-BA-1 HYPERACTIVITY IN CHILDREN

Purpose: To develop objective instruments with which to measure activity in children, and, with the use of these instruments and electronic apparatus, to investigate the effects of psychopharmacological agents on the activity level, learning, and memory of exceptional children.
Subjects: Institutionalized retardates, emotionally disturbed children in special education classes, and normal children (in activity studies only).
Methods: A small motion transducer transmitter has been developed, slightly larger than a wrist watch, which can be attached to the child's body. As the child moves, the transmitter broadcasts an FM signal to receiving equipment which amplifies the signal, makes an analog record of movement, and simultaneously produces a digital output on paper tape of the analog signal. Stabilimetric chairs, which measure seat wiggles, have been developed and used in a classroom. When drugs are used with the exceptional children, measures of learning and retention are made with automated equipment.
Findings: Several studies have shown that a stimulant, methylphemidate, significantly improves learning, reduces reaction times, and reduces hyperactivity level in comparison with placebo, whereas a tranquilizer, thioridazine, significantly lowers learning, increases reaction times, and does not reduce hyperactivity level in comparison with placebo. Some evidence indicates that children's retention after 48 hours is worse when they learned the task under a drug (even a stimulant which originally improves acquisition) than compared with placebo. One study has shown that it is possible to condition activity level (either increase or decrease it) in a classroom situation with the stabilimetric cushion and automatic equipment.
Duration: June 1968-May 1971.
Investigator(s): Robert L. Sprague, Ph.D., Acting Director of Research and Associate Professor of Psychology, and John S. Werry, M.D., Research Psychiatrist and Associate Professor of Psychiatry, Children's Research Center and Department of Psychology, University of Illinois, Champaign, Ill. 61820.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: American Journal of Mental Deficiency, in press, 1968; other articles submitted for publication.

24-BA-2 LIFE EXPERIENCE OF LOWER CLASS CHILDREN

Purpose: To describe the cumulative life experiences of poor urban children from birth to age 11.
Subjects: 79 Negro, white, and Puerto Rican children born in the same municipal hospital in 1956-1957, of low birthweight and of low social class.

Methods: Children received pediatric and psychological examinations in preschool years, and school records are now being reviewed to determine educational achievement. Parents are interviewed to learn of changes in family structure. School achievement will be analyzed on basis of birthweight, I.Q. based on preschool tests, and family organization.
Findings: Ninety percent of the sample have been located living in the same geographic area in which they were born.
Duration: January 1968-June 1969.
Investigator(s): Helen Wortis, M.S., Director, Studies of Urban Children, League School for Disturbed Children, 567 Kingston Ave., Brooklyn, N. Y. 11203.
Publications: Paper presented at Meetings of American Orthopsychiatric Association, April 1969, New York City, and American Association on Mental Deficiency, May 1969, San Francisco.

24-BA-3 PSYCHOLOGICAL DEVELOPMENT AND BEHAVIOR GENETICS

Purpose: To estimate the relative contribution of genetic, constitutional, and experiential factors to psychological development.
Subjects: Twin and nontwin siblings; subject pairs representing different heredity-environment combinations.
Methods: In a longitudinal study, data on prenatal and perinatal history of twins and nontwin siblings are obtained and, beginning at three months after birth, children are observed and tested at regular intervals with major attention focused on emergence of cognitive processes and early manifestations of temperament and personality. Data are examined for variations in growth rate and in level achieved for the separate variables, and determinants are sought in the components of within- and between-family variance, genetic variation, nongenic physiological variation due to prenatal and birth effects, and environmental variation. Cross-sectional studies employ groups of subject pairs ranging from identical twins to adopted but unrelated children raised together in the same household in order to obtain a broad sample of cognitive, personality, and psychophysiological variables. Profile analysis is performed on the vector of scores for the subject pairs in each group in order to identify the ratio of within- to between-pair variance on the several measures, and groups are compared to estimate the relative contribution of genetic and environmental factors to a given variable. Also, an attempt is being made to isolate constitutional and experiential factors that cause within-pair variance when heredity is held constant.
Duration: September 1967-September 1971.
Investigator(s): Ronald S. Wilson, Ph.D., Director, Anne M. Brown, M.S., Research Associate, Child Development Unit, and Duncan R. MacMillan, M.D., Assistant Professor, Department of Pediatrics, University of Louisville School of Medicine, Louisville, Ky. 40202.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-BA-4 COMPETENCE AT AGE FIVE AS A FUNCTION OF PRIOR STATUS AND NURSERY SCHOOL EXPERIENCE

Purpose: To follow the developmental progress of five-year-old children who have been in a nursery school at age four, and to compare developmental ratings at age four with developmental ratings at age five.
Subjects: 20 five-year-olds.

Methods: Children are observed in group and individual play sessions. Comparisons will be made between (1) group observations at age four and group observations at age five, (2) individual observations at age four and individual observations at age five, and (3) group observations at ages four and five v. individual observations at ages four and five.
Duration: October 1968-September 1969.
Investigator(s): Stritham Thanaphum, M.D., Staff Child Psychiatrist, and Jay G. Hirsch, M.D., Supervisor, Program in Preventive Psychiatry, Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611.
Cooperating group(s): Kenneth Montgomery Charitable Foundation.

24-BA-5 MATERNAL CIGARETTE SMOKING AND INFANT DEVELOPMENT

Purpose: To study the effect of maternal smoking on fetal activity and on subsequent postnatal infant development.
Subjects: The fetuses of 25 expectant mothers who smoke at least one pack of cigarettes a day, and 25 fetuses of nonsmoking mothers.
Methods: Mothers will record their felt fetal movements during the last two and one-half months of pregnancy. Babies will be evaluated at 12 and 24 weeks on the behavioral areas of the Gesell Development Schedules by a trained Gesell tester. IPAT anxiety scores will be obtained on the smoking and nonsmoking mothers. Differences in fetal activity between the fetuses of smoking and nonsmoking mothers will be computed by the t test. Differences in measurement on the Gesell Development Schedules between the two groups of infants will be made by employment of the Mann-Whitney U Test.
Duration: September 1968-August 1969.
Investigator(s): C. Etta Walters, Ph.D., Professor, and James C. Walters, Ph.D., Professor and Head, Department of Home and Family Life, Florida State University, Tallahassee, Fla. 32306.
Publications: Child Development and/or Journal of Genetic Psychology.

24-BA-6 STUDY OF "SENIOR YEAR"

Purpose: To conduct a followup study of teenagers, and to test a number of hypotheses growing out of previous work with these children; specifically, to study the relationship of early vulnerability, vicissitudes in development, and style of coping to their learning patterns, level of achievement, and current self-image.
Subjects: 17- and 18-year-old high school seniors studied since infancy.
Methods: Anxiety, cognitive development, school achievement, and self-image will be determined through a psychiatric interview, observations of functioning in test situations, analysis of zones of cognitive functioning in relation to motivation, and administration of WISC, Strong Vocational Interest Blank, Reasons for Occupational Choice, Gordon's Survey of Personal Values, California Personality Inventory, Rorschach, and TAT.
Duration: Not reported-August 1969.
Investigator(s): Lois Barclay Murphy, M.D., Director, and Alice Moriarty, Ph.D., Research Psychologist, Division of Developmental Research, Research Department, The Menninger Foundation, Topeka, Kan. 66601; Povl W. Toussieng, M.D., Director of Child Psychiatry, University of Oklahoma Medical Center, Oklahoma City, Okla. 73104.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-BA-7 CRYING IN INFANCY

Purpose: To gather normative data on infants' cries.
Subjects: 13 normal, full-term babies.
Methods: Twenty-four hour tape recordings were made in the home once every two weeks in the first three months of life, and analyzed for amount of crying by hour.
Duration: September 1967-August 1968.
Investigator(s): Freda G. Rebelsky, Ph.D., Associate Professor of Psychology, Boston University, Boston, Mass. 02215.
Publications: To be submitted to Developmental Psychology.

24-BA-8 PSYCHOHORMONAL RESEARCH

Subjects: Normal children, ages 8 to 14.
Methods: Exploration into simultaneous psychic and hormonal evaluation in normal children from latency to early adolescence.
Duration: September 1968-continuing.
Investigator(s): Marvin B. Krims, M.D., Assistant Professor of Psychiatry, Boston University School of Medicine, Boston, Mass. 02118.

24-BA-9 MATERNAL PELVIC SIZE AND NEUROLOGICAL OUTCOME AT SEVEN YEARS

Purpose: To investigate the relationship of small maternal pelvic size to neuropsychological outcome in the child.
Subjects: 213 children of vertex births.
Methods: Children were given psychological examinations at age seven.
Findings: Children born of small pelvis mothers had a significantly lower WISC Verbal I.Q. than those born of large pelvis mothers, but did not rate significantly lower on the Performance I.Q.; those born of small pelvis mothers who had been delivered by forceps made more errors on the Tactile Finger Recognition Test than children of large pelvis mothers who had also been delivered by forceps. All children delivered without forceps scored higher on the Bender Gestalt than those delivered with them.
Duration: June 1968-June 1970.
Investigator(s): Lee Willerman, Ph.D., Research Psychologist, and John A. Churchill, M.D., Acting Head, Section on Pediatric Neurology, Perinatal Research Branch, National Institute of Neurological Diseases and Stroke, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Md. 20014.

Physical

24-CA-1 BEDWETTING AND THE DEVELOPMENT OF NOCTURNAL URINARY CONTINENCE

Purpose: To improve upon treatment techniques employed to correct bedwetting, and to describe factors involved in the etiology of the disorder.
Subjects: 10 normal children, ages 2 to 10.
Methods: An electronic signal generator attaches to a cotton brief worn by the child. If the child is not immediately aroused by the electronic

signal, he is manually aroused. Adjunct therapy includes induced consumption of liquids during daytime hours. Data include times of nocturnal events, appropriate and inappropriate, volume of urine voided in either case, and residue following bedwetting.
Findings: All subjects have shown improvement directly related to age of the child. Etiological factors principally involved appear to be high threshold of arousal and genitourinary anomalies.
Duration: 1965-continuing.
Investigator(s): R. Keith Van Wagenen, Ph.D., Associate Professor of Educational Psychology, Arizona State University, Tempe, Ariz. 82581. (Reported by Dr. Thomas H. Metos, Bureau of Educational Research and Services, Arizona State University.)
Publications: Probably *Journal of Developmental Psychology*.

24-CC-1 HABITUATION OF THE AUDITORY EVOKED RESPONSE IN NORMAL AND NEUROLOGICALLY IMPAIRED CHILDREN

Purpose: Habituation can be considered as one form of learning. This study will examine the rate of habituation in two groups of children with emphasis upon relating the electrophysiological data to behavioral difficulties in processing or retaining auditory information.
Subjects: Normal children and children with known or suspected neurological impairments, with focus of attention upon children with communication disorders.
Methods: Repetitive auditory stimuli are being presented to each subject while the EEG responses are processed by means of a small digital signal averager. The rate of reduction in the amplitude of the evoked cortical response is used as the measure of habituation. The electrophysiological data are then compared with such behavioral measures as tests of auditory memory and receptive language.
Duration: March 1969-March 1971.
Investigator(s): Bruce A. Weber, Ph.D., Research Audiologist, Child Development and Mental Retardation Center, University of Washington, Seattle, Wash. 98105.
Publications: Plan to publish in *Journal of Speech and Hearing Research* or *American Journal of Mental Deficiency*.

24-CC-2 STIMULUS CONTROL AS A FUNCTION OF AGE

Purpose: To investigate the development of stimulus control as a function of age and the influence of multiple and single stimulus testing on results in assessing the control; to develop a procedure for investigating stimulus control.
Subjects: Four groups of boys and girls, ages 2.5 to 3, 7 to 8, 11 to 12, and 19 to 20.
Methods: Size, form, and color or hue are assessed for stimulus control properties. In the multiple stimulus testing, one group is used to test all three stimulus dimensions. In the single stimulus testing, a separate group is used to test each stimulus dimension. The Guttman and Kalish adaptation of the free-operant method for studying stimulus generalization is being used in the development of the procedure for studying stimulus control.
Duration: February 1968-May 1969.
Investigator(s): Luke S. Watson, Jr., Ph.D., Director of Behavioral Research, Columbus State School, 1601 W. Broad St., Columbus, Ohio 43223.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-CG-1 THE EFFECT OF MENTAL AND PHYSICAL REHEARSAL ON THE LEARNING OF TWO GROSS MOTOR SKILLS

Purpose: To study the effects of various amounts and types of mental rehearsal used in conjunction with physical practice upon the learning and retention of two gross motor skills; specifically, to study the relative effect of two combinations of mental and physical rehearsal along with one schedule of traditional physical practice.
Subjects: Six groups of junior high school boys.
Methods: Analysis of variance used to compare the effectiveness of practice schedules on test and retention days but also at all points in the learning curve.
Duration: Not reported-1968.
Investigator(s): Joseph B. Oxendine, M.Ed., Chairman, Department of Health, Physical Education, and Recreation, Temple University, Philadelphia, Pa. 19122.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Research Quarterly of American Association of Health, Physical Education, and Recreation, 1969.

24-CG-2 VISUOMOTOR AND SPATIAL ORGANIZATION OF CHILDREN

Purpose: To investigate children's ability to copy two-dimensional patterns by drawing and by walking under conditions of restricted and expanded spatial fields; to study the effect of increased visual cues on pattern walking performance; to define components of pattern walking, to determine the kinds of organizing cues used in pattern reproduction, and to provide normative data for pattern walking performance.
Subjects: Normal boys and girls, ages 6 through 9, and educable mentally retarded boys, ages 10 through 14.
Methods: Children are asked to make paper-pencil copies of 10 simple patterns. Within a week after drawing, the same patterns are reproduced by walking them under varying conditions of structure of an expanded spatial field: under conditions of no defined reference points, defined reference points, and reference points plus visual tracing cues. All testing is done individually in the child's school.
Findings: Findings suggest significant differences in performance of normal and EMR boys; normal boys improve in performance as more visual cues are available, while EMR boys do not. Preliminary results suggest a sex difference favoring boys, based on normal samples.
Duration: March 1968-June 1969.
Investigator(s): Barbara Keogh, Ph.D., Assistant Professor, University of California Graduate School of Education, Los Angeles, Calif. 90024.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Two reports have been submitted for publication; further reports will be prepared for journal publication.

24-CH-1 ACOUSTIC FACTORS IN INFANT VOCAL BEHAVIOR

Purpose: To provide basic information on processes involved in preverbal utterances of infants; to determine factors which influence preverbal vocalizations; to investigate the relationship of these utterances to language development.
Subjects: Three groups of 10 infants each at ages three, five, and seven months.

Methods: Acoustic correlates of high and low spontaneous vocal rates are determined through the use of a sound spectrograph which measures characteristics of infants' vocalizations.
Duration: September 1967-August 1969.
Investigator(s): Ronald L. Webster, Ph.D., Associate Professor, and Mary H. Steinhardt, M.A., Senior Research Associate, Department of Psychology, Hollins College, Hollins College, Va. 24020.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.

Intellectual

24-DA-1 SHARPER MINDS PROGRAM--A DEMONSTRATION PROGRAM IN DEVELOPING SPEECH, THOUGHT, SOCIAL COMPETENCE, AND MOTIVATION TO LEARN AMONG CHILDREN IN POVERTY AREAS

Purpose: To develop speech facility, thought, social competence, and motivation to learn in children of poverty areas so that they will be socially, culturally, and intellectually competent to function in modern American society.
Subjects: 154 Negro boys ages 9 to 11 from a quarter-square mile area located on Chicago's West Side; experimental, control, and spread-of-effect groups of boys from the same area.
Methods: The basic operational unit in the project is the problem-solving group. There will be imaginative problem-solving sessions and problem-solving trips. Seven basic principles will be implemented in the program: imaginative problem-solving, aggressive verbal exchange, teamwork, discussion of the immediate environment and one's place in it, systematic exposure to the social, cultural, and mechanical phenomena of society, consistent and rewarding relationships with competent adult models, both Negro and white, and positive definition of the child regarding both now and the future. Standard tests and other instruments will be used to evaluate the program.
Duration: October 1965-September 1969.
Investigator(s): Daniel Scheinfeld, M.A., Research Associate, Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611.
Cooperating group(s): Chicago Better Boys Foundation.
Publications: Research Report, Institute for Juvenile Research, and publication in appropriate journals.

24-DA-2 EVOKED BRAIN POTENTIALS TO EXPECTANCY AND MEANING: THE CONTINGENT NEGATIVE VARIATION (CNV)

Purpose: To develop measures of cerebral evoked potentials relating to psychological and behavioral states which would have both scientific and clinical value; to develop diagnostic methods for use with patients.
Subjects: 80 normal children; 100 normal adults; many patients with organic and psychiatric disorders.
Methods: Cerebral electrical potentials evoked by psychological stimuli presented through the auditory and visual senses are being studied in children and adults. The Contingent Negative Variation (CNV) is a cerebral conditional response to stimulus situations involving learning and expectancy. Computer analysis is applied to EEG and physiological

recording during stimulus presentation. These measures are being applied to children with learning disorders, cultural deprivation, and suspected organic problems. The computer-analyzed EEG recordings are compared to other psychophysiological responses and psychological tests to help in the differential diagnosis of learning problems based on neurological or psychological disturbances.
Findings: Normal age variation of CNV from 6 to 18 has been obtained.
Duration: September 1966-September 1972.
Investigator(s): Jerome Cohen, Ph.D., Professor, Department of Neurology and Psychiatry, Northwestern University Medical School, Chicago, Ill. 60611.
Cooperating group(s): W. and Jessie Clement Stone Foundation; National Science Foundation.
Publications: Psychophysiology 2:3:187-196, January 1966; other papers to appear in EEG and psychological journals; eventually a monograph or book on completion of studies.

24-DB-1 MODIFICATION OF COGNITIVE SKILLS AMONG LOWER CLASS NEGRO CHILDREN: A FOLLOWUP TRAINING STUDY

Purpose: To determine the effects of employment classification v. attention training on cognitive functioning of lower socioeconomic Negro children.
Subjects: 69 lower class first grade Negro children from the 1966-1967 study, approximately half of whom had been trained in classification; half were controls. (See Research Relating to Children, Bull. No. 23-DE-2.)
Methods: Children were pretested on classification tasks involving object and picture sorting, conservation of mass and number, and the Peabody Picture Vocabulary Test. They were then assigned to one of two training procedures, one in which the focus was on classification, the labeling and identification of the polydimensionality of objects, and the other on the discrimination, scanning and generalization of visual stimuli. Groups were trained for nine consecutive sessions in numbers of four to seven.
Findings: Children trained the year before still had advantages in the capability to classify on more than one criterion. No change in conservation behavior was found; further data analyses are going on into changes in other areas.
Duration: September 1967-August 1968.
Investigator(s): Irving E. Sigel, Ph.D., Chairman of Research, and Patricia Olmsted, M.A., Coordinator of Research, Head Start Project, Merrill-Palmer Institute, 71 E. Ferry Ave., Detroit, Mich. 48202.
Cooperating group(s): Detroit Public Schools.
Publications: Book in preparation for publication in 1969.

24-DB-2 THE INTERACTION OF THE ADULT AND THE CHILD IN THE PRESCHOOL SETTING

Purpose: To investigate interactions between very young children and adults in home and nursery school settings; to determine how cognitive strategies are developed in order to assist the teacher in promoting effective and efficient cognitive development.
Methods: All verbal interaction between children and adults in socialization situations is tape recorded in both home and nursery school settings; interaction is then categorized and evaluated. Additional techniques for recording interaction, such as video recording, are planned.

Duration: February 1966-January 1970.
Investigator(s): Clara P. Baldwin, Ph.D., Senior Research Associate, Center for Research in Education, Cornell University, Ithaca, N. Y. 14850.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-DB-3 MATERNAL INFLUENCES UPON DEVELOPMENT OF COGNITION

Purpose: To follow up a group of mothers and their children in order to predict the child's cognitive development and school achievement during the first three years of school, and to make a longitudinal analysis of the growth of cognitive abilities over these years.
Subjects: 163 Negro mothers and their four-year-old children who were subjects in a study of cognitive environments of preschool children.
Methods: In followup, children were tested before entry into school and at end of each year through grade three. Prediction aspects of study included preschool cognitive measures such as I.Q., Piaget-type tasks, concept attainment, reflectiveness, curiosity and creativity, verbal facility, and specific academic skills, as well as orientation toward school as expressed in teachers' ratings, grades, and other measures of ability to cope with the social and authority relationships presented at school. Additional data were obtained from mothers, as well as naturalistic observation of mother-child interaction in the home.
Duration: March 1964-March 1969.
Investigator(s): Robert D. Hess, Ph.D., Lee Jacks Professor of Child Education and Professor of Psychology, Stanford University, Stanford, Calif. 94305.
Cooperating group(s): U. S. Office of Economic Opportunity.
Publications: In *Developing Programs for the Educationally Disadvantaged*, A. Harry Passow (Ed.). New York: Teachers College Press, Columbia University, 1968; *The New Elementary School*, A. Frazier (Ed.). Washington, D. C.: Department of Elementary Principals, National Education Association, 1968; *Early Education: Current Theory, Research and Practice*, R. D. Hess and R. Bear (Eds.). Chicago: Aldine Publishing Co., 1968; *School Review* 75:4:414-427, 1967; others.

24-DC-1 EXPERIMENTER ROLE EFFECTS ON CHILDREN'S LEARNING

Purpose: To investigate the effects of two roles portrayed by experimenters on the performance of children in learning situations, and to determine where in learning situations social reinforcement (e.g., approval, disapproval) may prove most effective.
Subjects: Elementary school children.
Methods: Paper and pencil perception scales, simple motor tasks, and simple and complex learning tasks (discrimination learning).
Findings: Indications that effects of social reinforcement are on motivational variables rather than acquisition variables, and that effects of social reinforcement on learning are not apparent in initial period when children are presented with new or novel task.
Duration: March 1968-August 1969.
Investigator(s): Sara Allen, Ph.D., Assistant Professor of Psychology, Chico State College, Chico, Calif. 95926.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: To be submitted for publication.

24-DC-2 VERBAL AND NONVERBAL EMPHASIZERS AND CHILDREN'S DISCRIMINATION LEARNING

Purpose: To compare effects of labels and nonverbal stimulus emphasizers on children's learning of discrimination reversal shifts.
Subjects: Nursery school and kindergarten children.
Methods: Children are tested individually on a standard two-choice simultaneous discrimination problem, including initial acquisition, 10 overtraining trials, and a shift, either reversal or extradimensional. Independent groups are tested with no emphasizer, verbal labels from outset of training, verbal emphasizer introduced on overtraining trials, nonverbal emphasizer from outset, and nonverbal emphasizer introduced during overtraining trials.
Duration: Spring 1968-January 1969.
Investigator(s): Ellen A. Strommen, Ph.D., Assistant Professor of Psychology, Michigan State University, E. Lansing, Mich. 48823.
Publications: Plan to submit to journal by June 1969.

24-DC-3 THE DEVELOPMENT OF MEDIATION IN CHILDREN

Purpose: To test the Kendlers' hypothesis (see Research Relating to Children, Bull. No. 18-G-14) that preschool children, unlike older children, do not ordinarily use verbal mediators in performing simple transfer-learning problems.
Subjects: Children, ages four and eight.
Methods: Children were tested and compared on a nonreversal shift to cues reinforced either 33 percent or 67 percent of the time in original learning. According to the Kendlers' hypothesis, the partial-reinforcement variable would affect the transfer learning of the four-year-olds only.
Duration: September 1967-May 1968.
Investigator(s): Joseph L. Wolff, Ph.D., Associate Professor of Educational Psychology and Psychology, University of Illinois, Urbana, Ill. 61801.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Submitted to Journal of Experimental Child Psychology, 1969.

24-DC-4 DEVELOPMENT OF CRITERIA FOR THE IDENTIFICATION OF PRESCHOOL CHILDREN WITH LEARNING PROBLEMS

Purpose: To study child behavior in the school for the purpose of identifying variables which inhibit achievement.
Subjects: 42 kindergarten students who, during the 1960 school year, attended the Malcolm Price Laboratory School, University of Northern Iowa, Waterloo, Iowa.
Methods: Structured interviews, held with the parents of each child in 1960 and in 1968, were aimed at gaining knowledge about the child's behavior in the home and about his interpersonal relationships outside the school. Three authorities in child guidance and child development observed the children in the classroom during their kindergarten and first grade experiences. The observers attempted to assess each child's ability to take initiative, his interpersonal relationships, and his emotional expressiveness. This same observation procedure was repeated in 1968. Standardized achievement, personality, and intelligence tests have been administered intermittently to all subjects from kindergarten through the eighth grade. Anecdotal records have also been kept on each student by teachers. The statistical treatment will be a repeated measurements

design, involving a combination of analysis of variance and correlational techniques. Test results and interview data will be intermingled with clinical observations to determine optimal measurement of each child's behavioral patterns.
Duration: 1960-1969.
Investigator(s): C. E. Alexakos, Ph.D., Assistant Professor, and Manford A. Sonstegard, Ph.D., Professor, Counseling and Guidance, West Virginia University, Morgantown, W. Va. 26506.
Publications: Publication planned in appropriate journals.

24-DC-5 THE ASSESSMENT AND IMPROVEMENT OF LEARNING AND LANGUAGE ABILITIES IN CHILDREN

Purpose: To continue work toward developing a useful test of learning proficiency for young children and of developing methods for training children to learn successfully (see *Research Relating to Children*, Bull. No. 22-DC-4); to contribute to more effective language development programs in early childhood education.
Subjects: 320 four- and five-year-old children from preschool and kindergarten classes; 250 preschool and kindergarten children.
Methods: The project consists of two parts, with different children in each part. In Part I, children are pretested with the Peabody Picture Vocabularly Test, Paired-Associate Learning Test, or Free Recall Learning Test. They are then taught methods for learning to associate pairs of objects with one another in memorable ways and how to remember a whole collection (15 to 20) of objects. Posttest follows. In each of the three phases, the children are seen individually. In Part II, a sentence imitation test is developed to determine how well a young child can handle certain grammatical constructions useful in everyday communication. Some children are then trained in the use of more complex sentences, and this training will be compared with that involving the vocabulary development of other children. An additional experiment will study the comprehension of standard English by children who speak a Negro dialect. Testing is done individually and the training in groups of two or three.
Duration: 1968-not reported.
Investigator(s): William D. Rohwer, Jr., Ph.D., Associate Research Psychologist and Associate Professor of Education, Institute of Human Learning, and Paul R. Ammon, Assistant Professor of Education, University of California School of Education, Berkeley, Calif. 94720.

24-DC-6 LEARNING AND MEMORY PROCESSES IN CHILDREN

Purpose: To clarify learning and memory processes and the course of their development, with particular focus on coding processes for memory of verbal material.
Subjects: Elementary school children; high school and college students.
Methods: Word recognition memory studies.
Duration: Spring 1966-continuing.
Investigator(s): James W. Hall, Ph.D., Associate Professor of Education and Psychology, Northwestern University, Evanston, Ill. 60201.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: *Journal of Experimental Child Psychology* 6:52-60, 1968; *Journal of Educational Psychology* and *Journal of Experimental Psychology*, in press, 1968.

24-DC-7 RESEARCH ON THE DEVELOPMENT OF LEARNING SKILLS IN MENTALLY SUBNORMAL AND VERY YOUNG NORMAL CHILDREN

Purpose: To determine the factors relevant to the development of learning skills, including transfer and the use of equivalence relations.
Subjects: Preadolescent, adolescent, and adult mental retardates; normal children, ages three, four, and five.
Methods: Experimental studies using small matched groups employed to reveal relevant variables.
Findings: Man copes with the complexity of incoming stimuli by means of selective attention and categorization. A set to attend to the categorical properties of stimuli can be induced by training subjects with material possessing no perceptual or conceptual connection with the transfer task upon which the training influence is measured. Complexity of training material rather than difficulty was a major significant factor, as was overlearning. The efficacy of this set in handling new material has been established both for pictorial and verbal material as well as in free recall. Results are interpreted as indicating that sensitivity to the categorical properties of stimuli is strengthened in these procedures, which may possibly tap one of the ways in which the child's effective response repertoire is developed. Results are related to theories of other workers.
Duration: 1963-1970.
Investigator(s): A. D. B. Clarke, Ph.D., Professor of Psychology, and Anne M. Clarke, Ph.D., Research Fellow, The University, Hull, England.
Cooperating group(s): The Nuffield Foundation; Association for the Aid of Crippled Children.
Publications: Journal of Experimental Child Psychology, in press, 1969 and 5:562-576, 1967.

24-DC-8 PSYCHONEUROLOGICAL CONCOMITANTS OF LEARNING DIFFICULTIES

Purpose: To investigate the incidence of associated psychological and neurological findings in children with learning difficulties.
Subjects: 100 children, consecutively referred to the Joseph P. Kennedy Memorial Hospital for psychoneurological evaluation because of academic failure.
Methods: A psychological test battery is administered with division of population into perceptually handicapped, nonperceptually handicapped, and overt neurological groups. Comparisons among groups will be made according to the dimensions of the test battery, and correlations will be obtained among the factors of the test battery.
Findings: Learning disability group has been relatively evenly divided as to the incidence of perceptual problems and nonperceptual problems, with a smaller, but significant group exhibiting overt neurological problems.
Duration: September 1968-September 1969.
Investigator(s): F. William Black, Ed.M. (Ph.D. Candidate), Psychologist, Joseph P. Kennedy Memorial Hospital, Brighton, Mass.
Publications: Publication planned in appropriate journals.

24-DC-9 THE INFLUENCE OF MODE OF PRESENTATION, AGE, AND INTELLIGENCE ON PAIRED-ASSOCIATE LEARNING

Purpose: To investigate the influence of sensory channel presentation (vision v. audition v. combined channels) on the paired-associate learning of retarded and average children of equal M.A. and C.A.

Subjects: 36 retarded high school age children and 72 average children (36 equal M.A. and equal C.A.) drawn from public school regular classes and special classes for the educable mentally retarded.
Methods: Stimulus members (geometric figures) were presented visually via slide projector. The response members of the pairs (color names) were presented by slide projector, tape recorder, or both, depending upon treatment group. The 10 pairs were presented in the recall method with randomization of order of presentation. Criterion of learning for each subject was the successful identification of all response members during one trial. Analysis was based on the number of trials to criterion.
Findings: Average high school students were found to be superior in speed of learning to retarded subjects of equal C.A. as were average subjects over retarded subjects of equal M.A. Average subjects of high school age also reached criterion more rapidly than average subjects of lower C.A. No treatment effect or interaction.
Duration: April-July 1968.
Investigator(s): C. Milton Blue, Ph.D., Professor of Special Education, Division of Exceptional Children, University of Georgia, Athens, Ga. 30601.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Submitted to American Journal of Mental Deficiency, 1969.

24-DC-10 ANTICIPATION VERSUS RECALL IN THE PAIRED-ASSOCIATE LEARNING OF AVERAGE AND RETARDED SUBJECTS

Purpose: To compare the speed of paired-associate learning of average and retarded subjects of equal C.A. when two differing methods or presentation of paired items were employed--anticipation method v. recall method.
Subjects: 24 educable mentally retarded subjects and 24 of average intelligence, ages 14 to 18 years 5 months, and drawn from public school regular classes and special classes.
Methods: Two comparable paired-associate learning tasks, visually presented, were utilized with each subject. Each task consisted of 10 paired items presented via slide projector. Each pair consisted of a black geometric design on a white background (stimulus) and a color name (response). Half of the retarded and half of the average subjects received Series I learning task in the anticipation method and Series II in the recall method of presentation. The remaining subjects had the procedure reversed. Seven to 10 days intervened between task presentations. Order of presentation was randomized in each condition. Criterion of learning was 10 consecutive correct responses in any one trial.
Findings: Retarded subjects required significantly more trials to learn than did the average subjects regardless of condition. Method of recall produced superior learning speed in both groups. The order in which the methods were presented was critical; practice in the method of recall facilitated learning in the condition of anticipation.
Duration: April-July 1968.
Investigator(s): C. Milton Blue, Ph.D., Professor of Special Education, Division of Exceptional Children, University of Georgia, Athens, Ga. 30601.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Submitted to American Journal of Mental Deficiency, 1969.

24-DC-11 FEEDBACK AND REMEDIAL INSTRUCTION IN LEARNING HIERARCHICAL TASKS

Purpose: To compare various types of remedial procedures in meaningful learning tasks involving concepts, principles, and problem-solving.
Subjects: Elementary school and college students.
Methods: Through autotutor teaching machines, elementary students were presented with programmed instruction in the fundamental concepts of fractions, while college students received a programmed presentation of an imaginary science. Remediation procedures or independent variables investigated were conditions in which the student made an error on the test and he was: (1) returned to the previous presentation until he passed the test (correction); (2) returned to the previous presentation and allowed to proceed whether or not he passed the test the second time (no correction); (3) shown how to work the problem step by step (specific review) until he could pass the test (correction); or (4) given specific review with no correction. These procedures were compared with two control conditions in which the test was followed by no feedback or remediation, or right-wrong feedback and no remediation. Response latency and errors for each frame were collected by means of a 20-channel recorder which monitored the teaching machine. Dependent variables were number of errors and latency response during learning and on a posttest.
Duration: February 1966-April 1969.
Investigator(s): M. David Merrill, Ph.D., Associate Professor of Educational Psychology, Brigham Young University, Provo, Utah 84601.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Plan to submit report to *Journal of Educational Psychology* and/or *American Educational Research Journal*.

24-DC-12 ELABORATIVE FACILITATION AND LEARNING IN CHILDREN

Purpose: To examine factors relating to the role of elaborative activities in children's learning.
Subjects: Children in kindergarten through grade six.
Methods: A variety of methods, including paired-associate, serial, and sentence learning, will be used. Major attention is given to: the role of linguistic structures in the facilitation of noun-pair learning produced by sentence contexts; the temporal locus, nature, and the development of elaborative processes; developmental comparisons of the primacy of verbal and visual elaborative processes; and manipulation of factors presumed to be responsible for observed variations in the magnitude of facilitation produced by elaborative conditions in children's learning.
Duration: September 1968-February 1971.
Investigator(s): William D. Rohwer, Jr., Ph.D., Associate Research Psychologist and Associate Professor of Education, Institute of Human Learning, University of California, Berkeley, Calif. 94720.
Cooperating group(s): National Science Foundation.
Publications: Publication planned in appropriate psychological journals.

24-DC-13 REINFORCEMENT CONDITIONS IN CHILDREN'S LEARNING

Purpose: To investigate the influence of positive and negative reinforcement conditions on children's performance of a two-alternative discrimination learning task.
Subjects: Lower and middle class boys and girls.
Methods: Reinforcers are introduced to children through two methods--one

in which the reinforcers follow specific responses as a supplement to neutral information, and another in which they are used to evaluate overall adequacy of performance. Within each method, effects of reinforcement class (reward, punishment, or reward-punishment), type of reinforcer (verbal or nonverbal), and age, sex, and socioeconomic status of the child are studied.
Duration: 1966-1969.
Investigator(s): Janet T. Spence, Ph.D., Professor and Chairman, Department of Psychology, University of Texas, Austin, Tex. 78712.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: To be submitted to Child Development and Psychonomic Science.

24-DD-1 TRANSITION FROM SENSORIMOTOR TO VERBAL INTELLIGENCE

Purpose: Previous research has shown that infant test performance during the first two years of life correlates poorly with later measures of intelligence and that social class differences in intelligence have not been demonstrated until the third year of life, when lower class children show a decrement in performance. The infant tests may be inadequate in predicting later intelligence and in differentiating among social class groups because they are essentially measuring perceptual-motor skills, which skills appear to be unrelated to later conceptual-verbal ability and do not seem to differentiate among social class groups. The present study attempts to determine (1) whether a battery of assessment procedures, given at 18 months of age, which measure factors such as motivation, cognitive style, and language ability, can predict intellectual performance at 36 months better than infant test scores alone, and can detect social class differences earlier than has been reported previously; and (2) whether the decline in intellectual performance observed in many lower class children is due primarily to a language deficit or whether the additional factors being assessed may also contribute.
Subjects: 18-month-old children representing two extreme social classes.
Methods: Children are given battery of assessment measures at 18 months and then assessed every six months until age three on standard intelligence test performance; direct measures of learning ability; mother-child interaction in a learning situation; motivation and cognitive style; intellectual stimulation provided at home; and language development.
Duration: June 1968-May 1972.
Investigator(s): Mark Golden, Ph.D., and Beverly Birns, Ph.D., Assistant Professors of Psychology, and Wagner Bridger, M.D., Associate Professor of Psychiatry, Department of Psychiatry, Albert Einstein College of Medicine, Yeshiva University, Bronx, N. Y. 10461.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-DE-1 ACQUISITION AND UTILIZATION OF CONCEPTUAL RULES IN CHILDREN

Purpose: To isolate specific sources of difficulty encountered by young children learning difficult conceptual rules; to develop methods and procedures which permit generally rapid acquisition of conceptual tasks by younger children.
Subjects: Normal children, ages three and one-half to seven and one-half.
Methods: Standard concept identification procedures are employed. The

stimuli usually involve multidimensional geometric patterns. Subjects are presented a series of stimuli which they must classify as an example or nonexample, and their classification is followed by immediate feedback. This usually continues until a prescribed number of consecutive stimuli are appropriately classified.
Findings: Five-year-old children have been trained on the most difficult bidimensional rule investigated (biconditional) in a single experimental session of approximately 45 minutes. In addition, a number of factors affecting rule learning in children have been discovered.
Duration: February 1968-January 1971.
Investigator(s): Peder J. Johnson, Ph.D., Assistant Professor of Psychology, University of New Mexico, Albuquerque, N. M. 87107.
Publications: To be submitted to psychological journals; possibly a book.

24-DE-2 A PILOT INVESTIGATION OF SOME LEARNING TECHNIQUES DESIGNED TO ACCELERATE THE CHILD'S UNDERSTANDING OF THE CONCEPT OF CONSERVATION

Purpose: To devise a variety of educational experiences for young children, providing both a set of learning situations and the means of testing results of the children's learning.
Subjects: Nursery school and kindergarten children, ages 45 to 65 months.
Methods: Experiences were intended to help children become less egocentered in both object and social relationships. These experiences were divided into two groups: (1) to facilitate learning the principle of conservation of discontinuous quantity (i.e., that the total amount remains constant even though divided, which is prerequisite to understanding concepts of number), and (2) to develop ability in role taking. It was assumed in planning these learning situations that children of this age have almost no understanding of conservation principles such as reversibility or reciprocity; that these principles can be learned through role playing and will transfer to the child's relationship to objects; and that training in perceiving objects from a variety of perspectives will transfer to social situations and improve the child's ability to understand and take various social roles.
Duration: Not reported-August 1968.
Investigator(s): Kenneth D. Feigenbaum, Ph.D., Associate Professor of Psychology, Antioch College, Washington Center, 1744 Riggs Pl., N. W., Washington, D. C. 20009.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Journal of Genetic Psychology, in press, 1969.

24-DE-3 CATEGORIZING BEHAVIOR IN UNDERPRIVILEGED ISRAELI CHILDREN FROM SEVERAL ETHNIC GROUPS

Subjects: 240 lower class first grade children: three middle-Eastern groups and one East-European group; 120 middle class children: one middle-Eastern group and one East-European group.
Methods: Object sorting task for study of concept formation. Replication of I. E. Sigel's work at Merrill-Palmer Institute. (See Research Relating to Children, Bull. No. 12-D-9.)
Duration: Not reported-January 1969.
Investigator(s): Shlomo Sharan, Ph.D., Assistant Professor, Tel Aviv University, Tel Aviv, Israel.
Cooperating group(s): Bar Ilan University, Israel.

24-DE-4 PIAGET'S THEORY OF INFANTS' OBJECT CONCEPTS

Purpose: To explore infants' behavior with respect to hidden objects in terms of Piaget's theory.
Subjects: 6- to 13-month-old infants drawn from the practice of pediatricians and from well baby clinics.
Methods: Variants of the delayed response technique are used, including (1) in a two-position situation, the effect of varying amount of experience at position 1 and length of intratrial delay interval upon search at position 2; (2) effect of hiding a toy and "no toy" upon search in one- and two-position delayed response; and (3) effect of observing one object hidden and finding a different object.
Duration: March 1968-May 1970.
Investigator(s): Gerald Gratch, Ph.D., Associate Professor of Psychology, University of Houston, Houston, Tex. 77004.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: When preprints become available, they will be supplied on request.

24-DF-1 IDENTIFICATION AND ASSESSMENT OF THE THINKING ABILITY OF YOUNG CHILDREN

Purpose: To identify and evaluate divergent and convergent thinking in preliterate children; to study the possible effects of parental educational levels upon the development of these types of mental functions; to determine the needs of children in developing productive thinking potential.
Subjects: 500 children, ages two and one-half to five, representing a wide range of socioeconomic statuses.
Methods: Test based on Guilford's concept of creativity (1959-1960, University of Southern California) is administered to subjects. Results will be studied by means of factor analyses and other evaluative processes such as classification of children by a Q-type factor analysis. From this study further refinement of the tests will be made, which will provide a better basis for the study of mental functioning.
Duration: June 1966-May 1968.
Investigator(s): Leland H. Stott, Ph.D., Faculty Emeritus, The Merrill-Palmer Institute, 71 E. Ferry Ave., Detroit, Mich. 48202.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-DF-2 SOCIAL CLASS AND SEX DIFFERENCES IN SOCIALIZATION FOR PROBLEM-SOLVING IN BOMBAY, SAN JUAN, AND MINNEAPOLIS

Purpose: To determine nature and extent of social class and sex differences in problem-solving ability and in parent-child interaction, and to determine the extent to which differences in parent-child interaction are associated with differences in problem-solving ability of the child.
Subjects: 128 early adolescents and their parents. In each city, half are middle class and half working class, half are boys and half girls.
Methods: Three-person family groups are observed during attempts to solve a standard task. The task provided measures of problem-solving ability, and the observations provided measures of parent-child interaction, particularly the power or control each member of the family was able to exercise over the behavior of the others and the degree of warmth or support extended by each member toward others.

Findings: Working class children and girls receive less support and are less able to exercise power than middle class children and boys. Both power and support are correlated with problem-solving ability but in opposite directions. High parental support was correlated with correct solutions to the problem and was uncorrelated or negatively correlated with measures of creativity. Low parental support and high child control were associated with creativity and were uncorrelated or negatively correlated with correct solutions.
Duration: 1963-1971.
Investigator(s): Murray A. Straus, Ph.D., Professor of Sociology, University of New Hampshire, Durham, N. H. 03824.
Cooperating group(s): U. S. Educational Foundation, India; Social Science Program, Puerto Rico Department of Health; National Science Foundation; National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: In *The Family as a Problem-Solving Group*, Joan Aldous (Ed.), 1969 or 1970. Copy of paper available on request. Book entitled *Class and Family in Three Societies*, in preparation, 1969.

24-DF-3 A DEVELOPMENTAL STUDY OF THE RELATIONSHIP BETWEEN REACTION TIME AND PROBLEM-SOLVING EFFICIENCY

Purpose: To test the hypothesis that fast responding inhibits hypothesis-generation by fourth graders.
Subjects: 60 children each in grades two through five.
Methods: Within each grade level, children were randomly assigned to one of three instruction groups. In an attempt to produce a broad range of reaction times, one group emphasized speed, one stressed deliberation, and one was neutral. Subjects were given four problems, each requiring the identification and production of a sequential pattern. Distribution of success was rank-ordered for each grade and divided into fast-, medium-, and slow-responding groups.
Duration: 1967-1968.
Investigator(s): Stanley R. Friedman, Ph.D., Clinical Psychologist, Mental Health Clinic, 1960 Flower St., Bakersfield, Calif. 93308.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-DG-1 DEVELOPMENTAL CHANGE IN THE PERCEPTUAL BEHAVIOR OF INFANTS

Purpose: To explore and define some of the critical variables which mark perceptual maturation from the neonate to the later stages of infancy and early childhood.
Methods: Various physiological measures including heart rate, galvanic skin response, respiration, and motility are used along with preference indicators to assess the attentional valence of stimuli such as lines varying in orientation, moving v. static forms, simple v. complex forms, different colors, and different aspects of a human face including moving v. nonmoving eyes. Apgar ratings at birth are used as a gross index of central nervous system competency during the perinatal period. Periodic administration of the Bayley Scales permits subsequent evaluation of CNS integrity and the specific role of visual perception in the overall developmental level of the child. Infants with suspected or known pathology are evaluated by comparison of their visual behavior with that of normal infants.
Duration: January 1968-December 1970.
Investigator(s): Marilyn M. Marcus, Ph.D., Head, Developmental Psychology Section, and John S. Robinson, Ph.D., Chief Research Psychologist, Research Division, Sonoma State Hospital, Eldridge, Calif. 95431.

24-DG-2 INDIVIDUAL DIFFERENCES IN NORMAL PERCEPTUAL PROCESSES

Purpose: To investigate differences among children in relation to size constancy.
Subjects: 48 children, ages 5 to 10.
Methods: In two tasks related to size constancy, children first selected the largest or smallest of a set of triangles presented at different distances; actual size differences used were varied to achieve approximately 50 percent errors for each child. Experimental measure computed for each subject was the percent of errors projectively associated with distance. In the second task, children were shown two triangles at the same distance and asked how the size of one would have to be changed in order for it to look twice as far away as the other.
Findings: There was a change, with age, in the second (conceptual) task, but not in the first (discriminative) task.
Duration: Completed.
Investigator(s): V. R. Carlson, Ph.D., Chief, Section on Perception, Laboratory of Psychology, National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Md. 20014; and Judith L. Rapoport, M.D., Staff Psychiatrist, Child Guidance Clinic, District of Columbia Department of Public Health, Washington, D. C. 20007.
Publications: Accepted for publication in Journal of Experimental Child Psychology.

24-DH-1 CHILDREN'S SECOND LANGUAGE ACQUISITION OF SPANISH SYNTAX IN THE FOREIGN ENVIRONMENT

Purpose: To describe and classify the types of syntactic patterns produced by children learning Spanish as a second language.
Subjects: Six American six-year-olds and one four-year-old learning Spanish in Spain.
Methods: Speech was recorded while each subject conversed with a native monolingual speaker of Spanish in the following stimulus situations: (1) with a research assistant trained to elicit conversation by means of drawings, storytelling, and especially structured questions; (2) with peers, ages four to eight, in supervised play situations inside the home. Transcriptions of these recordings are being analyzed for a specific grammatical system of Spanish as it emerges in these children.
Findings: Preliminary findings on four six-year-olds show the development of the interrogative system and other grammatical subsystems to be similar in all subjects. Research is continuing on noun phrases, embedded sentences, and imperatives found in the data.
Duration: February 1967-January 1969.
Investigator(s): Daniel P. Dato, Ph.D., Assistant Professor of Linguistics, Georgetown University School of Languages and Linguistics, Washington, D. C. 20007.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Children's Acquisition of Spanish Syntax in the Foreign Environment, Monograph, Office of Education Research Report, 1969; Developmental Psycholinguistics: Research and Techniques on Children's Language Learning, film, 1969; Development of Spanish Interrogatives in Children's Second Language Learning, mimeographed report, 1968.

24-DH-2 A COMPARISON OF NATURALISTIC AND EXPERIMENTAL METHODS OF STUDYING SPEECH IN PRESCHOOL CHILDREN

Purpose: To explore the extent to which the often noted language deficiencies of lower social class children are a function of the data-gathering methods used.
Subjects: Negro and white, lower class and middle class, four-year-old children.
Methods: The naturally-occurring speech of the children is recorded through the use of telemetric monitoring equipment; each child is administered the ITPA and WPPSI.
Duration: July 1968-June 1969.
Investigator(s): Dale L. Johnson, Ph.D., Associate Professor and Chairman, Department of Psychology, University of Houston, Houston, Tex. 77004.
Publications: To be submitted to an appropriate psychological journal.

24-DH-3 RESEARCH PROGRAM OF APHASIC INVOLVEMENTS IN CHILDREN

Purpose: To study aphasic children relative to developmental factors and perceptual functioning that differentiate them from other severely language handicapped children; to develop therapeutic techniques for aphasic children.
Subjects: Children with severe language retardation and perceptual involvements but not severely mentally retarded or impaired in hearing.
Methods: Psycholinguistic assessment for language status and psychological and neurological assessment for perceptual functioning; therapeutic procedures based on models of normal language development; behavior shaping and reinforcement approaches.
Findings: Perceptual factor distinguishes the aphasic from the mentally retarded and hearing impaired; higher incidence of positive EEG findings in aphasic population.
Duration: September 1967-September 1972.
Investigator(s): Jon Eisenson, Ph.D., Professor of Speech and Hearing Science, and Director, Institute for Childhood Aphasia, Stanford University School of Medicine, Stanford, Calif. 94305.
Cooperating group(s): National Institute of Neurological Diseases and Stroke, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: British Journal of Disorders of Communication 1:1:21-32, 1966.

24-DH-4 A STUDY OF FUNCTIONS OF SPEECH IN FOUR- AND FIVE-YEAR-OLD NEGRO BOYS IN A SMALL GROUP SITUATION

Purpose: To investigate the relationship between speech functions and cognitive development.
Subjects: 9 Negro boys, ages four and five, from a public housing project in Chicago.
Methods: Three experimental conditions were established: water play, puzzle play, and grocery store play. Each child was paired with another child under each of the above conditions. The verbal interaction between each pair of children was tape recorded. Categories of response were coded in terms of speech functions, role behavior, and cognitive elaboration. These coded functions will be analyzed in terms of peer interaction, type of activity, family characteristics, and data obtained from previously administered tests.

Duration: February 1968-June 1969.
Investigator(s): J. Susanna Bagur, M.A., Junior Research Associate, Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611.

24-DH-5 A COMPARATIVE STUDY OF GROUP INQUIRY WITH ADVANTAGED AND DISADVANTAGED STUDENTS

Purpose: To compare the language and inquiry style of inner city black and suburban white teenagers; to examine the validity of Basil Bernstein's hypothesis that lower class dialect ("restricted linguistic code") necessarily inhibits the degree of specificity and abstractness which can be communicated.
Subjects: 200 teenagers.
Methods: Teenagers were divided into 19 discussion groups of 10 to 12 members, with 11 groups from the inner city and 8 from the suburbs. Group discussions were tape recorded and transcripts analyzed quantitatively and qualitatively. Quantitative analysis compared use of "restricted and elaborated linguistic code" by both groups, while qualitative analysis revealed degree of abstraction present in the inner city discussions in which restricted linguistic code was employed.
Findings: Use of elaborated or restricted code was more closely associated with "shared context" between speakers than with social class. Marked shifts between "elaborated" and "restricted" code were found in both suburban and inner city discussions. Examples of highly abstract inquiry were found in inner city group discussions conducted in restrictive linguistic code. Results question Bernstein's hypothesis that social class is the strongest determinant of language style, which in turn is the strongest determinant of cognitive style, and introduce the factor of "shared context" as an important determinant of language style.
Duration: September 1966-January 1968.
Investigator(s): B. J. Chandler, Ph.D., Dean, Northwestern University School of Education, Evanston 60201; and Frederick D. Erickson, Ph.D., Assistant Professor, University of Illinois at Chicago Circle, Chicago, Ill. 60680.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Elementary English, April 1969; final technical report, January 1968.

24-DH-6 RESEARCH IN MEXICO ON LANGUAGE SOCIALIZATION AND THE CHILD'S CONCEPTUALIZATION OF SOCIAL ORGANIZATION

Purpose: To determine how language development is related to the child's acquisition and use of social rules.
Subjects: 10 families in Santa Barbara, 12 families in Mexico City, and 18 families in Buenos Aires, each with two or more children, ages 8 months to 10 years.
Methods: Focus is on children up to age six. A tape recorder is used for interviews, for questions about childrearing, and to record sentence imitation of the child. At times it is left in the home for periods of up to one hour while the experimenter is not present. Most of the families are being followed for eight months, while some have been followed for over a year.
Duration: June 1967-continuing.
Investigator(s): Aaron V. Cicourel, Ph.D., Professor of Sociology, University of California, Santa Barbara, Calif. 93106; and Eliseo Veron,

Research Professor of Sociology, Center for Sociological Research, Torcuato de Tella Institute, V. D. Pino 3230, Buenos Aires (26), Argentina.
Cooperating group(s): Social Science Research Council.
Publications: Articles planned shortly.

24-DH-7 A CROSS-LINGUISTIC AND CROSS-CULTURAL RESEARCH PROPOSAL: LANGUAGE AND THOUGHT IN DEVELOPMENT AND ADULT PERFORMANCE

Purpose: To study the development of linguistic, cognitive, and memory abilities in the acquisition of language, and of logical capacities in general.
Subjects: Children, ages 18 months to 5 years, from municipal nurseries and écoles maternelles; college students.
Methods: With children, experimental psychological methods and genetical epistemology are utilized in determining performance capacities available at each point in age. With college students, information is derived from error patterns.
Findings: Development of language and other cognitive capacities seem to be U-shaped, i.e., younger children sometimes perform better than older ones.
Duration: January 1969-December 1971.
Investigator(s): Jacques Mehler, Ph.D., Chargé de Recherche, Centre National de la Recherche Scientifique, 15 Quai Anatole France, Paris VII, France.
Cooperating group(s): Foundations' Fund for Research in Psychiatry.
Publications: *Science*, 1967 and 1968; *International Journal of Psychology*. Additional journal publications planned.

24-DH-8 GENERALITY OF WORD ASSOCIATION RESPONSE SETS

Purpose: To investigate the antecedents of four word association response sets--contrasts, synonyms, functional (foot--shoe), predicative (red--apple). These sets may be a characteristic of adult language users.
Subjects: Family units with at least one preschool child.
Methods: Current work has shifted from an emphasis on establishing the generality and reliability of the four sets in adults to an emphasis on antecedents of the sets. Children are studied longitudinally from preschool period to age six (the sets are present at six); the families are measured with the same instruments and retested annually to determine the role of parents as models in the development of particular associative sets.
Duration: 1963-1970.
Investigator(s): Louis J. Moran, Ph.D., Professor of Psychology, University of Texas, Austin, Tex. 78712.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

Personality

24-EA-1 DEVELOPMENT OF COOPERATIVE AND COMPETITIVE MOTIVES

Purpose: To assess the motivational and strategic aspects of the development of cooperative and competitive behavior in situations of social interdependence.
Subjects: Second, fourth, and sixth grade boys in the United States, Belgium, Greece, and Japan.
Methods: A game paradigm is utilized for assessing changes in those social motives which underlie cooperative and competitive behavior.
Findings: Findings indicate an increase in motives to maximize relative position or gain as a function of age in American and Belgian subjects.
Duration: January 1967-continuing.
Investigator(s): Charles G. McClintock, Ph.D., and David M. Messick, Ph.D., Associate Professors of Psychology, University of California, Santa Barbara, Calif. 93106.
Cooperating group(s): Laboratory for Experimental Social Psychology, Universiteit te Leuven, Leuven, Belgium; The Athenian Institute of Anthropos, 8, Dem. Soutsou St., Athens 602, Greece; National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Journal of Experimental Social Psychology, in press, 1969; monograph planned.

24-EA-2 BIRTH ORDER AND PERSONALITY DIFFERENCES

Purpose: To explore the relationship between personality adjustment and ordinal position, and to evaluate the concurrent validity of the IPAT Children's Personality Questionnaire in differentiating between well adjusted and poorly adjusted children.
Subjects: 500 public school children in grades four to eight.
Methods: Subjects were given the IPAT Children's Personality Questionnaire and a social desirability questionnaire. Teacher ratings of adjustment and referrals for counseling services were also obtained for all subjects.
Duration: April 1967-June 1969.
Investigator(s): Elise E. Lessing, Ph.D., Senior Research Associate, Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611.

24-EA-3 A STUDY OF DEVELOPMENTAL AND SEX DIFFERENCES IN PHYSIOGNOMIC PERCEPTION

Purpose: To determine whether the prevalent mode of perceiving shifts from a physiognomic mode to a more geometrical-technical mode is a function of maturation; to investigate sex differences in physiognomic perception, and their relationship to creativity.
Subjects: 525 subjects in grades three to eight.
Methods: The children were administered the Torrence Test of Creative Thinking and the Physiognomic Cues Test which is designed to measure the manner in which things are perceived, that is, in an "animated" way, or in a "geometrical-technical" (literal) way.
Duration: March 1967-June 1969.
Investigator(s): Mark Oberlander, Ph.D., Research Associate, Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611.
Cooperating group(s): Lincolnwood, Ill. Schools.

24-EA-4 INDIVIDUAL DIFFERENCES IN GHETTO FOUR-YEAR-OLDS

Purpose: To test the reliability of measures rating children's developmental levels as judged by play session behavior.
Subjects: 35 four-year-olds.
Methods: Five clinicians rate protocols of play sessions. Their judgments will be compared and correlated with those of two examiners, teachers, and social workers.
Duration: October 1968-August 1969.
Investigator(s): Jay G. Hirsch, M.D., Supervisor, Program in Preventive Psychiatry, Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611.
Cooperating group(s): Kenneth Montgomery Charitable Foundation.
Publications: Paper presented at American Orthopsychiatric Association Meeting, April 1969, New York, N. Y.

24-EA-5 PERSONALITY DEVELOPMENT OF MEXICAN SCHOOL CHILDREN

Purpose: To study the personality development of Mexican school children; to do a cross-cultural comparison with a parallel study carried out by Dr. Wayne H. Holtzman in Austin, Tex. (see Research Relating to Children, Bull. No. 18-J-2); to develop norms for the tests used in the research; to train personnel.
Subjects: 150 randomly chosen first, fourth, and seventh grade children from each of three schools in Mexico City which are typical of the three main subsections of the educational system.
Methods: Demographic study prior to testing determined the relevant socioeconomic variables in Mexico City so that the sample selected overlapped sufficiently with the United States sample and was still representative of the Mexico City school child. Children were given a battery of tests including the Holtzman Inkblot, WISC, Time Estimation, Draw-a-Person, Witkin's Embedded Figures, Object Sorting, TASC, Visual Fractionation, and Conceptual Style; further data were collected as children were followed for five years. In addition, tests were developed to measure differences in style of coping with stress in the United States and Mexican cultures.
Duration: 1964-1971.
Investigator(s): Rogelio Diaz-Guerrero, M.D., Ph.D., College of Psychology, National Autonomous University of Mexico, Mexico City, D.F., Mexico.
Cooperating group(s): Foundations' Fund for Research in Psychiatry.
Publications: In Proceedings of the Tenth Inter-American Congress of Psychology. Mexico City: Editorial F. Trillas.

24-EB-1 COMPETENCE AND DEPENDENCE IN CHILDREN--PARENTAL TREATMENT OF FOUR-YEAR-OLD GIRLS

Purpose: To study the relationship between parents' treatment of their child and the child's relative competence and dependence.
Subjects: 150 four-year-old girls and their parents.
Methods: Girls and parents were assessed through category rating scales, global judgments from observations of the child in the nursery and of the family group, and information from interviews with the child and each parent. Other parental traits, specific childrearing practices, and demographic data were explored through multivariate analysis. The basic evaluation will be the correspondence between the parent and child variables.
Duration: June 1967-September 1968.

Investigator(s): William F. Clapp, Ph.D., Assistant Professor, University of Nevada, Reno, Nev. 89507.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: To be submitted as a monograph to The Society for Research in Child Development.

24-EB-2 PARENTAL PREFERENCE OF PRESCHOOL CHILDREN

Purpose: To test hypotheses in a theory of sex-role identification; specifically, that both male and female infants identify with the mother, but when boys begin to perceive that they belong in a different sex category from the mother, they become highly motivated to switch from mother identification and establish masculine identification.
Subjects: 30 boys and 30 girls in each of age groups two, three, and four; their parents.
Methods: A male and female experimenter present 13 play situations to each child, and the child is asked to choose which parent he wishes to participate with him in seven of the situations. The remaining six activities intervene between choices. The intervening situations are introduced to disrupt choice patterns, such as the tendency to alternate between choosing mother and father. Play situations include construction with blocks, London Bridge, jigsaw puzzles, etc. For the choice situations the experimenter describes and shows the child what the activity will be and then asks, "Who do you think would be best to help you with this game (play this game with you), your Mommy or your Daddy?" After the choice has been made, the chosen parent is brought in and plays the game with the child. The intervening situations are played with the experimenters. The dependent variable is the proportion of mother v. father choices.
Findings: Preliminary analysis suggests that boys choose the father significantly more frequently than the mother, but that girls choose the mother and the father equally often. Boys and girls appear to differ significantly in this regard.
Duration: April 1968-June 1969.
Investigator(s): David B. Lynn, Ph.D., Professor of Human Development, and Amy Cross, B.S., Research Assistant, Department of Applied Behavioral Sciences, University of California, Davis, Calif. 95616.
Publications: *Developmental Psychology*.

24-EC-1 PARENTAL INFLUENCE ON COLOR PREFERENCE OF FOUR-YEAR-OLDS

Purpose: To determine the influence of parents on young children in an area of such subconscious prescription as color preference in an attempt to better understand the relationship of directed and creative growth of preprimary children.
Subjects: Four-year-old middle class boys and girls in Liverpool, N. Y.; their parents.
Methods: Design and apply a color preference test which will permit the subjects (1) to indicate a valid color preference, (2) to indicate a multicolor preference, or (3) to indicate a lack of color preference. Applied test calls for the selection of 25 colored cubes, six or more required to indicate validity. In addition, color value preferences are recorded.
Findings: There are boys and girls of preprimary age, as well as mothers and fathers, who have no color preference. The percentage of parental influence on the color preference of young children is very low. Blue presumably is preferred color.

Duration: February 1967-February 1969.
Investigator(s): Michael F. Andrews, Ph.D., Chairman, Division of Art Education, Syracuse University, Syracuse, N. Y. 13210.
Cooperating group(s): Center for Research and Development of Early Childhood Education, Syracuse University; Office of Education, U. S. Department of Health, Education, and Welfare.

24-EC-2 PATHWAYS TO IDENTITY--THE DEVELOPMENT OF ASPIRATIONS AND VALUES IN URBAN NEGRO AND WHITE ADOLESCENTS

Purpose: To explore the conceptual and affective world of the low socioeconomic scale Negro American adolescent boy as it develops through time in order to provide data which will be used as a base for further research and in educational and social planning.
Subjects: Two groups of 75 disadvantaged seventh and ninth grade Negro boys from a de facto segregated, inner city school; comparison group of 35 white boys; 800 reference individuals, including family, peers, and teachers.
Methods: Relationships among background factors, changing aspects of individual differences, and parent-peer expectations and evaluations of youth are determined through the focal-child method which involves extensive interviewing and testing of students, and parallel interviews of reference individuals.
Duration: May 1965-September 1969.
Investigator(s): Robert A. Rosenthal, Ph.D., Florence C. Shelton, Ph.D., and Bernard E. Bruce, M.A., Lecturers, Harvard Graduate School of Education, Cambridge, Mass. 02138.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Books and articles in preparation.

24-EC-3 THE EFFECTS OF INCONSISTENCY AND HYPOCRISY UPON MORAL BEHAVIOR

Purpose: To investigate the effects of a model upon altruistic behavior in children.
Methods: In the child's presence, a model exhorts charity or greed, or remains neutral, and either donates or fails to donate to needy others.
Findings: Exhortations fail to effect donations in boys or girls in either the presence or absence of the model; model's behavior, however, does elicit donations, although these effects are rather weak. Interpersonal attraction of the model is based primarily on his exhortations. and very little upon his behavior. While children notice inconsistency between the model's acts and his words, such "hypocrisy" fails to effect either donations or thefts. Thus, the child's behavior seems to be affected by the model's behavior, while his judgment of the other is determined by the nature of the exhortations.
Duration: Not reported-August 1970.
Investigator(s): James H. Bryan, Ph.D., Assistant Professor of Psychology, Northwestern University, Evanston, Ill. 60201.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-EG-1 EFFECTS OF PRESLEEP STIMULI

Purpose: To assess the relations of dreams to nondream experiences, i.e., their "meaning", at ages characterized by a considerable but partially known and/or predictable variety of such experiences and by relative simplicity of dream content. (See Research Relating to Children, Bull. No. 20-DD-1.)

Subjects: Children studied longitudinally from ages 4 to 9 and 9 to 13; institutionalized children.

Methods: Children will sleep 9 or 10 nights a year for 4 or 5 years in the University of Wyoming's Sleep Laboratory. They will be awakened during different EEG sleep stages, particularly EEG stage REM, for the purpose of retrieving dream content. Collateral test and observational data will also be collected. Evaluations are made of differences in dream content and other forms of sleep mentation as a function of age; developmental aspects of sex differences in dream content; the correlation of dreams across time with personality and intelligence test variables and with the child's waking behavior and significant events in his waking life; and ontogenetic changes in dream processes as reflected in the mode in which stimuli applied during sleep are incorporated into dream content. In addition, differences in dream content between these children and children in institutions will be investigated, as will the incidence, psychophysiology, correlates, and therapeutic treatment of children's nightmares. Methods vary with the particular objective of the study.

Duration: June 1968-June 1973.

Investigator(s): David Foulkes, Ph.D., Associate Professor of Psychology, University of Wyoming, Laramie, Wyo. 82070.

Cooperating group(s): National Science Foundation.

Publications: Plan comprehensive final report and intermittent papers on selected topics.

Social

24-FA-1 AN INVESTIGATION OF INTERPERSONAL REACTION DEVELOPMENT IN YOUNG CHILDREN

Purpose: To investigate and evaluate the sequential development of children's mental and social capabilities in order to learn more about the development of their social perceptions.

Subjects: 400 children in grades 4, 7, 10, and 13.

Methods: Questionnaire examined children's expectations about behavioral reactions between persons holding the status relationships of adult and adult, adult and child, and child and child. Children's responses to questionnaire were studied in order to find an expected changing pattern of response through several age levels until the adult view was approximated; students' expectations were then compared to an adult standard in order to assess the development of the child's view of social relationships.

Duration: 1967-1968.

Investigator(s): James A. Schellenberg, Ph.D., Professor of Sociology, Western Michigan University, Kalamazoo, Mich. 49007.

Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-FA-2 CHILDREN'S SMALL GROUP BEHAVIOR (CHILDREN'S BARGAINING BEHAVIOR)

Purpose: To examine age differences in children's bargaining styles and techniques; to examine the effects of certain situational variables (opponent's concession rate, bargaining as individual or as representative, competitive v. cooperative induction) on bargaining behavior and the values expressed to justify the behavior.
Subjects: Children, ages 7 to 16.
Methods: Two experimental tasks have been used: a "distribution of resources" task in which two players are required to reach agreement on the distribution between them of a number of poker chips, where completely equal distribution is impossible, and a "buyer-seller" task in which the subject takes the role of a buyer and bargains with a preprogrammed "seller" as to a final selling price.
Duration: June 1966-June 1969.
Investigator(s): Daniel Solomon, Ph.D., Chief, Division of Attitudes and Social Development, and Daniel Druckman, Ph.D., Senior Research Associate, Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611.

24-FA-3 DEVELOPMENT OF EXPERIMENTAL TECHNIQUES TO ASSESS THE EFFECTANCE MOTIVE

Purpose: To develop experimental measures of effectance and its correlates, and to refine a behavioral observation scale for evaluative use in preschools.
Subjects: 40 children, ages four to five.
Methods: Behavior of a child is rated in an experimental playroom. Initial phase involves rating of exploratory and manipulative behaviors by two observers and an experimenter who remains with the child. Within the room is a subdesign of the space providing measures of exploratory behavior in an open v. enclosed space. Statistics, basically correlational, will be used to determine the relatedness of various behaviors.
Duration: November 1968-July 1969.
Investigator(s): Joan Costello, Ph.D., Senior Research Associate, and Jay G. Hirsch, M.D., Supervisor, Program in Preventive Psychiatry, Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611.
Cooperating group(s): Kenneth F. Montgomery Charitable Foundation.

24-FA-4 DEPENDENCY AND MODELING IN PRESCHOOL CHILDREN

Purpose: To differentiate emotional reliance of children on adults, characterized by emphasis on self, from emotional closeness to adults, characterized by interest in and communication with the adult, with the element of "giving to" rather than "getting from"; to study the effects of these two types of dependent relationships on modeling.
Subjects: 38 four- and five-year-old children; control group of 15 children.
Methods: Observations of the nature of the dependent relationship with the teacher are made in semicontrolled small play groups of six or seven children and in regular preschool groups for each child. Children are then observed in an experimental situation with the teacher, with opportunities for modeling of physical actions, value preferences, and verbal statements. Reliability was established on scoring of modeling before observations of dependent relationships were coded. Control groups established measures of modeling as unlikely to occur without stimulus of experimenter. Observations of children's self-control when experimenter left the room further describe relationship with teacher-experimenter.

Findings: Observations differentiate children on both dependency type and degree of modeling.
Duration: September 1967-June 1969.
Investigator(s): Phyllis M. Scott, Ph.D., Lecturer, Faculty of Education, Monash University, Melbourne, Australia.
Cooperating group(s): Melbourne Lady Gowrie Child Centre; Creswick Foundation, Australia.
Publications: Will submit to Child Development.

24-FC-1 NONSMOKING MOTIVATION THROUGH TEACHER GROUPS

Purpose: To inform school children about the health dangers of cigarette smoking and involve them in smoking control programs; to train teachers to successfully motivate their students not to smoke or to stop.
Subjects: Students in grades 7 to 12 in public, private, and parochial schools; their teachers.
Methods: Teachers selected as health coordinators from their schools were divided into four groups which met at least five times during the school year and were assisted by members of the Onondaga County Interagency Committee. Groups developed their own methods to be used in educating students in their schools. At the first meeting, an evaluating instrument was given to determine the health coordinator's level of knowledge, attitude, and behavior concerning smoking. Health coordinators held followup meetings periodically at their own schools and with their fellow staff members in order to help develop a positive attitude toward smoking among all the faculty; each coordinator kept his faculty informed of the activities of the groups, and each faculty developed its own approach to education.
Duration: July 1965-October 1968.
Investigator(s): Virginia G. Harris, M.D., Clinical Associate Professor of Pediatrics, Upstate Medical Center, State University of New York, Syracuse, N. Y. 13210.
Cooperating group(s): National Clearinghouse for Smoking and Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-FC-2 ADOLESCENT USERS OF PSYCHEDELIC DRUGS

Purpose: To examine the careers and role mobility of adolescent users of psychedelic drugs; specifically, to investigate the nature and origin of drug-user roles, including their cognition by incumbents and others, and patterns of recruitment and change of state among these roles on the part of adolescents.
Subjects: High school students, including a subsample preselected on the basis of their likelihood of moving toward drug use in the near future.
Methods: In analyzing movement from one role to another, this research is complicated by the illegitimate nature of the defining activity and the absence of a preselected set of categories for classifying the population; thus, the present study entails intensive examination of the relevant criteria for identifying and differentiating drug-user roles. Through the use of relatively conventional survey and interview devices and new developments in techniques of eliciting semantic content and analyzing face-to-face interaction, changes in values, cognition of drug use, and behavior are assessed over a one-year period. Results are compared with differences in values and perception of the user role between identifiable "hippies" and the adult public at large. Data will also be collected from the "hippies" on their behavior and, retrospectively, on their careers.

Duration: October 1968-October 1970.
Investigator(s): Jerome Kirk, Ph.D., Assistant Professor of Sociology and Social Science, University of California, Irvine, Calif. 92664.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-FC-3 KNOWLEDGE, ATTITUDES, AND DRUG EXPERIENCE IN ADOLESCENTS AND YOUNG ADULTS

Purpose: To conduct a stratified survey of selected groups of young people in connection with a community program for prevention of drug abuse.
Subjects: Equal samples of males and females from grades 9, 10, and 12 in eight schools--two junior and two senior high schools in both an experimental and a control community, with one school in each community from a middle and one from a working class neighborhood; a junior college sample.
Methods: Anonymous questionnaires were administered to students inquiring into the favorability with which various drugs were viewed, the amount of contact the children had with these drugs, and their knowledge of the drugs, both "book knowledge" and "street knowledge"; a variety of background demographic data was also requested. Data were analyzed to relate attitudes, experience, and the two kinds of knowledge with background variables in each of the grade-sex groups from each of the schools; testing was repeated the following year in order to compare changes in the experimental community with those in the control.
Duration: February 1968-March 1969.
Investigator(s): John Marks, Ph.D., Associate Professor of Psychiatry, University of Oregon Medical School, Portland, Ore. 97201.
Cooperating group(s): Narcotics Center of Tacoma-Pierce County, 1138 Commerce St., Tacoma, Wash. 98401.
Publications: Report to Committee on Drug Dependence, February 1969.

24-FD-1 CHILDREN'S ATTITUDES TOWARD POLITICAL AUTHORITY FIGURES

Purpose: To compare children's attitudes of trust, duty, and efficacy toward President, mayor, policemen, teachers, and people in general.
Subjects: 474 urban white, Latin, Negro, and suburban white children in grades six to eight.
Methods: Several civics teachers' classrooms in each of three grades were surveyed in one urban and one suburban school on a pretested questionnaire. Analogous items were presented for the several authority figures.
Findings: Data are consistent with two hypotheses: (1) that a greater sense of trust toward teachers is correlated with a greater sense of efficacy and duty, and (2) that attitudes toward teachers are transferred to other authority figures, especially policemen.
Duration: March 1968-June 1969.
Investigator(s): Merton S. Krause, Ph.D., Supervisor, Program in Personality and Social Psychology, Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611.
Publications: To be submitted for publication.

24-FD-2 YOUTH CULTURES AND ASPECTS OF THE SOCIALIZATION PROCESS

Purpose: To conduct an exploratory study of the normal processes of socialization into adult roles in the society; specifically, to test the processes by which adolescent identities are cast off and new identities assimilated in the course of development of new values and interpersonal support for adult performances in college students; eventually, to develop models of postchildhood socialization for noncollege youth, and to develop comparable instrumentation to tap what seems to be a much more complex and less well understood experience that is still modal for the majority of American youth.
Subjects: National sample of 600 male and 600 female students from 12 colleges stratified by year in school.
Methods: Students were questioned by trained interviewers on factors such as attachment to family, microsocial environment of the college, quality of peer group relationships, religious and occupational origins and current concerns, and sexual attitudes and behavior. Underlying model of socialization was Eriksonian in character, focusing on the end of the psychosocial moratorium of adolescence and the transitional identity crisis of this period.
Investigator(s): William Simon, Ph.D., Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611; Paul H. Gebhard, Ph.D., Director, Institute for Sex Research, Indiana University, Bloomington, Ind. 47401; and John H. Gagnon, Ph.D., Department of Sociology, State University of New York, Stony Brook, N. Y. 11790.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: To be published by the Institute for Sex Research, probably in 1970.

SPECIAL GROUPS OF CHILDREN

Physically Handicapped

24-GB-1 DIMENSIONS OF COMPLEXITY IN THE AUDITORY COMPREHENSION OF APHASICS

Purpose: To study the relationship between the following components of auditory complexity in aphasics as compared to preschool children: comprehension of directional prepositions, comprehension of prepositions having purely grammatical functions, retention span for named object sequences, and the extent of comprehension vocabulary; to determine whether any of these dimensions is independent of the others, and if so, whether deviant scores are correlated with certain forms of aphasia and certain brain localizations; to determine the value of the devised tests in routine diagnostic study; to learn more about the order of the acquisition of comprehension skills in children.
Subjects: 40 normal children, ages four and five; 20 brain-damaged children with developmental language difficulty; 40 adult aphasics having some significant impairment of auditory comprehension.
Methods: Subjects tested with a 24-item directional preposition discrimination test, an 11-item grammatical preposition discrimination test, a pointing Span test involving sequences of two to six objects, and the Peabody Picture Vocabulary Test. Scores of normal children provide information on the normal relationship to be expected among the various tasks. Brain-damaged children are compared with the adults and the normal children.
Duration: September 1967-June 1969.
Investigator(s): Harold Goodglass, Ph.D., Director, Psychology Research, and Jean B. Gleason, Ph.D., Consultant, Aphasia Research Program, Veterans Administration Hospital, Boston, Mass. 02530.
Publications: Report in preparation.

24-GB-2 EARLY DIAGNOSIS OF HEARING USING AUDITORY EVOKED RESPONSES

Purpose: To validate auditory evoked responses for audiometry in early childhood, to improve current techniques and instrumentation, and to demonstrate the usefulness of early definitive diagnosis in terms of subsequent language development and emotional adjustment.
Subjects: Infants and preschool children referred to the laboratory of the clinics affiliated with the Albert Einstein College of Medicine and from other pediatricians, otolaryngologists, and speech and hearing centers in the Metropolitan New York area.
Methods: The children will be tested during sleep with auditory evoked responses, and will undergo complete otologic, audiologic, and neurologic evaluation. The results of auditory evoked responses will be correlated with the audiologic evaluation. The children will be followed longitudinally, and those with auditory evoked response and audiologic discrepancies will be reinvestigated. Methodological modifications to sort evoked responses as a function and phase of sleep and to recognize patterns will be investigated.
Findings: Auditory evoked responses are a valid test of hearing, but the method is still cumbersome, and the detection of questionable responses needs to be improved.

Duration: May 1968-April 1973.
Investigator(s): Isabelle Rapin, M.D., Associate Professor of Neurology and Pediatric Neurology, and Robert J. Rubin, M.D., Associate Professor and Director of Otolaryngology, Albert Einstein College of Medicine, Yeshiva University, Bronx, N. Y. 10461.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.
Publications: Will publish in appropriate journals.

24-GC-1 AN INVESTIGATION OF THE COGNITIVE DOMAIN OF LIPREADING

Purpose: To study the cognitive processes associated with lipreading.
Subjects: Four groups of lipreaders: 100 junior high school students, 100 high school students, and 100 each of male and female college students.
Methods: Three speakers narrated filmed lipreading tests consisting of a word test, a phrase test, and a sentence test. Tests of cognitive abilities in reasoning, perceptual speed, and verbal and spatial visualization were measured by a variety of pure factor tests.
Duration: January 1967-February 1968.
Investigator(s): Gordon Taaffe, Ed.D., Adjunct Professor of Psychology, University of Detroit, Detroit, Mich. 48221.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: To be submitted to *Journal of Speech and Hearing Research*.

24-GC-2 AN INVESTIGATION OF THE SELF-CONCEPTS OF CLEFT PALATE AND CYSTIC FIBROSIS PATIENTS

Purpose: To investigate the expressed concepts concerning themselves by teenagers with cleft lip and/or palate and teenagers with cystic fibrosis.
Subjects: Cleft patients and cystic fibrosis patients, age 11 and older.
Methods: Self-report questionnaire administered and analyzed.
Duration: September 1967-Spring 1969.
Investigator(s): H. Oliver Ohsberg, Ph.D., Assistant Director, Cleft Palate Center, University of Pittsburgh, Pittsburgh, Pa. 15213.
Cooperating group(s): National Institute of Dental Research, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Plan to publish.

24-GC-3 LEARNING DIFFICULTIES OF CHILDREN AS SEQUELAE OF VIRAL CENTRAL NERVOUS SYSTEM (CNS) INFECTIONS

Purpose: To delineate the sequelae of viral CNS infections as they relate to school achievement and learning problems; to compare and determine relationships between etiologic groups, age at onset, severity of neurological sequelae, school achievement and learning problems. (See *Research Relating to Children*, Bull. No. 20-FG-13.)
Subjects: 307 children with a history of viral CNS infection attending regular classrooms in public schools; 307 matched controls.
Methods: Psychological, educational achievement, and social competence data were gathered for children who had a history of primary or secondary viral encephalitis or meningitis, and for the control children selected

from among the classmates of the viral CNS children. Extensive medical and laboratory records were also available regarding the children who had been ill. Neurological examinations were made of a subsample of the group.
Findings: Children who had encephalitis scored significantly lower in I.Q. and on most achievement tests than did their paired controls. No significant differences were found between the meningitis cases and their controls. Further analyses are underway.
Duration: June 1966-continuing.
Investigator(s): Knox H. Finley, M.D., Director, Institute of Neurological Sciences, Pacific Medical Center; Richard Leonards, M.D., Chief, Department of Communicable Disease, Children's Hospital and Adult Medical Center; and Samuel Levine, Ed.D., Professor of Education and Psychology, San Francisco State College, San Francisco, Calif. 94132.
Cooperating group(s): State Department of Public Health and local health departments; city, county, and unified school districts in California; Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Final report in preparation.

24-GC-4 THE THALIDOMIDE PROBLEM IN WEST GERMANY

Purpose: To examine the sociological and social psychological correlates of those severe congenital impairments associated with the maternal ingestion of Contergan and other thalidomide-containing drugs in West Germany.
Subjects: West German children with thalidomide-attributed dysmelia and other physical impairments.
Methods: Epidemiological analysis supplemented by participant observation of children with impairments involving maternal ingestion of Contergan. Interviews conducted with treatment personnel, parents, and others involved in the care of the children.
Findings: The complex social situation of the so-called "Contergan Kinder" or "Thalidomide Children" of West Germany calls for the elaboration of adult oriented conceptualizations of illness and disability. The concept of congenital deviance may be employed in differentiating the social implications of dysmelia from those characterizing the adult onset of impairment, for the child is atypical, physically, at birth and has been socially designated as a "Contergan Kind" or "so geboren". Moreover, basic socialization to normal role expectancies follows, rather than precedes, the onset of impairment. The initial social experiences of the children are thus also atypical, being a function of both familial and medical networks.
Duration: 1965-1969.
Investigator(s): James O. Carpenter, Ph.D. Candidate, Graduate Research Associate, Division of Disability Research, Department of Physical Medicine, Ohio State University, Columbus, Ohio 43210.
Publications: *The Ohio Valley Sociologist* 32:4:23-24, Summer 1967; in *Abstracts of Contributed Papers, Medical Care Section, American Public Health Association, San Francisco, 1966*. Washington, D. C. 20402: U. S. Government Printing Office, 1966.

24-GC-5 AN ANALYSIS OF FACTORS RELATED TO DIFFICULTIES IN LEARNING AND ADJUSTMENT AMONG MINORITY GROUP CHILDREN

Purpose: To determine whether and which prenatal, perinatal, and early childhood conditions, nurture, and health are significantly related to development and school achievement at chronological age seven.

Subjects: 200 children drawn from the nationwide study in cerebral palsy conducted by the National Institute of Neurological Diseases and Stroke.
Methods: Early tests, beginning with prenatal maternal condition and following through to the battery of tests and developmental records at the seven-year level.
Findings: Certain items of the perinatal records, social conditions, and performance at age four on test battery are predictive of performance at age seven.
Duration: June 1968-not reported.
Investigator(s): Corina Mongcol Luong, Ph.D., (formerly) Bryn Mawr College, Bryn Mawr, Pa. 19010. (Reported by Rachel D. Cox, Ph.D., Chairman, Department of Social Work and Social Research, Bryn Mawr College.)
Cooperating group(s): Children's Hospital, Philadelphia, Pa.

24-GC-6 A FAMILY STUDY OF TWINS WITH CLEFT LIP AND PALATE

Purpose: To investigate the relative roles of genetic and environmental factors in the etiology of clefts of the lip and palate. This study is the first of a projected series of twin studies to be conducted in various parts of the United States.
Subjects: Approximately 65 pairs of twins in which one or both have a cleft of the lip and/or palate, ascertained primarily from California birth certificates, 1956-1966.
Methods: Each pair of twins and their family members will receive physical examinations, including X-ray and laboratory work. Data will be collected on growth patterns, dental development, speech and hearing, and neuromuscular coordination. Family, medical and social history will be obtained by interview of the parents for genealogic and epidemiologic analysis. Zygosity will be determined by blood grouping and dermatoglyphics. All relevant medical records will be abstracted to obtain additional information.
Duration: June 1967-December 1968.
Investigator(s): Egil P. Harvold, D.D.S., Ph.D., Chairman, Orofacial Anomalies Section, University of California School of Dentistry, San Francisco Medical Center; and Sylvia Hay, B.A., Acting Chief, Congenital Anomalies Section, Dental Health Center, Public Health Service, U. S. Department of Health, Education, and Welfare, 14th Ave. and Lake St., San Francisco, Calif. 94118.
Publications: Series of reports to be published.

24-GC-7 THE DELAYED MATCHING RESPONSE IN CEREBRAL PALSIED CHILDREN

Purpose: To study the effect of the delay interval, sequence of presentation, and behavior during the delay interval upon delayed matching-to-sample performance; to investigate the effectiveness of using tolerance for delay in delayed matching-to-sample problems as a diagnostic tool in perceptual-motor disorders associated with neurological dysfunction and in the study of short-term memory deficits.
Subjects: 18 children, ages 5-2 to 10-7, with a mean age of 7-11, all in residence at the Moody State School for Cerebral Palsied Children, Galveston, Tex.
Methods: Forty sets of three slides were chosen for each child. The first consisted of a single geometric figure, the second 4.7, 10, 22, or 47 seconds of darkness, providing the delay interval, and the third three geometric figures projected on the lower half of a screen directly in

front of the child. One of these three figures was identical to the stimulus figure in the first slide. The child matched them by pushing one of three telegraph keys located immediately under the figures. A correct match brought an automatically dispensed reward. Behavior during the delay periods was recorded, and frequency counts were made on verbalizations obviously referring to the figures and on the tracing of a pattern with the fingers, either on the screen, the table, or in the air.
Findings: Children showed significantly poorer performance when delay intervals were longer. A random presentation of stimuli facilitates performance significantly. There was near perfect matching (98.5 percent) following delays where some verbal label was attached to the stimuli or when the stimuli were traced with the fingers; this was true regardless of the length of delay.
Duration: December 1967-November 1968.
Investigator(s): William F. Patton, Ph.D., Assistant Professor, Department of Pediatrics, University of Texas Medical Branch, Galveston, Tex. 77550.
Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Submitted to British Journal of Psychology, 1969.

24-GC-8 CHILD HEAD INJURY PROJECT

Purpose: To investigate the early and long-term effects of head injury in children.
Subjects: Boys and girls who have sustained head injuries, ranging in age from birth through 14.
Methods: Children are studied through a longitudinal, controlled clinical investigation in which the natural history of head injury within the neurological, EEG, psychiatric, and psychometric disciplines is determined, and the interrelationships between the disciplines are evaluated. Data analysis focuses on age-effect relationships and factors which may have prognostic value in terms of the functional end result. It is expected that results of investigation will be readily applicable to clinical situations. Availability of prognostic criteria will be of value in the acute phase of injury, in planning rehabilitation, and in the medico-legal sphere. Findings may also enhance understanding of the maturing nervous system's response to injury.
Duration: 1964-continuing.
Investigator(s): Perry Black, M.D., C.M., Assistant Professor of Neurological Surgery, Johns Hopkins University School of Medicine, Baltimore, Md. 21205.
Cooperating group(s): National Institute of Neurological Diseases and Stroke, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: The Posttraumatic Syndrome in Children: Characteristics and Incidence, by P. Black et al. Springfield, Ill.: Charles C. Thomas, in press, 1969; in Proceedings of the International Conference on the Late Effects of Head Injury, Washington, D. C., 1968.

24-GD-1 INVESTIGATION OF CONGENITAL DEAFNESS

Purpose: To investigate the history and diagnosis of congenital hearing loss, and to follow up the effects of therapy.
Subjects: Patients at the Hard-of-Hearing Clinic, Hospital for Sick Children.

Methods: Parents fill out a questionnaire covering family, birth, health, speech, and hearing history, general development, emotional and social adjustment, and school data. Children receive an audiometric evaluation when possible.

Duration: February 1968-continuing.

Investigator(s): D. P. Mitchell, F.R.C.S., Chief of Otolaryngology, and Patricia E. Fenton, M.B., B.S., Clinical Fellow, The Hospital for Sick Children, Toronto, Ontario, Canada.

24-GE-1 TOWARD MORE EFFECTIVE VOCATIONAL GUIDANCE OF HIGH SCHOOL AND ADULT DEAF

Purpose: To develop predictors for the successful vocational adjustment of deaf persons.

Subjects: Deaf high school students and adults.

Methods: Vocational endurance is used as the criterion for measuring the vocational adjustment of the students; vocational endurance and level of vocational adjustment are used with the adults. Predictors are selected from a battery of tests including GATB Culture Fair Form, a lipreading test, Weingarten Interest Test, Bender Gestalt, Gottschalt Figures, and Gates Reading Survey.

Duration: June 1966-May 1969.

Investigator(s): David G. Berger, Ph.D., Director, Community Mental Health Research Office, Temple University, Philadelphia, Pa. 19140; Dr. William Craig, State School for the Deaf, and T. J. Holdt, Employment Placement Officer, State Board of Control, Capitol Building, Salem, Ore. 97301.

Cooperating group(s): Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-GE-2 APPLICATION OF VULNERABILITY AND COPING CONCEPTS TO "TOTAL THERAPY" OF BRAIN-DAMAGED CHILDREN

Purpose: To deal with the multiple cumulative problems arising from the complexities of the social, emotional, and educational adaptations which brain-damaged children confront, and to help them to cope with multiple interacting vulnerabilities and develop strengths.

Subjects: Children with brain damage or other organic difficulties which interfere with their adaptational capacities.

Methods: A "total therapy" approach, with integration of educational work, work with the family, and a multifaceted therapy program with the children.

Duration: Not reported-August 1969.

Investigator(s): J. Cotter Hirschberg, M.D., Associate Director and Supervisor of Therapy, Children's Hospital, Lois Barclay Murphy, Ph.D., Director, and Alice Moriarty, Ph.D., Research Psychologist, Division of Developmental Research, Research Department, The Menninger Foundation, Topeka, Kan. 66601.

Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-GE-3 EVALUATION OF THE PERDONCINI METHOD OF AUDITORY TRAINING

Purpose: To determine the effect of a specific approach to auditory training upon auditory reception skills (frequency, intensity, duration, discrimination, and speech reception thresholds).

Subjects: 36 children equally divided into two groups.
Methods: One group receives auditory training in the Perdoncini method, while the other receives traditional auditory training and educational procedures. Auditory discrimination and speech reception skills will be evaluated using automated procedures. Modular programming systems are employed so that subject responses dictate the degree of difficulty of subsequent stimuli.
Duration: February 1968-June 1969.
Investigator(s): Robert L. McCroskey, Ph.D., Professor of Logopedics, Wichita State University, and Director of Professional Services, Institute of Logopedics, 2400 Jardine Dr., Wichita, Kan. 67219.
Publications: Plan to publish in Volta Review.

24-GE-4 DEMONSTRATION OF HOME AND COMMUNITY SUPPORT NEEDED TO FACILITATE MOBILITY INSTRUCTION FOR BLIND YOUTH

Purpose: To demonstrate the effectiveness of an orientation and mobility training program for blind adolescents utilizing parents, teachers, and mobility specialists.
Subjects: 51 blind adolescents.
Methods: Earlier work identified essential orientation and mobility skills. (See Research Relating to Children, Bull. No. 20-FG-12.) Teachers of blind youth were given a course in orientation and mobility training and understood the task of teaching the basic technique. Through conferences and group meetings, the parents received instruction in the nature of the training. Mobility specialists gave individual instruction in cane techniques.
Findings: Teachers were able to give major assistance with the instruction in basic techniques. It required approximately 108 hours of individual instruction by the specialists to develop adequate skills to satisfy the needs of the typical blind youth. Parents who had acquired the necessary skill to work successfully with the problems of blindness were able also to provide adequate support for the orientation and mobility training.
Duration: July 1965-November 1968.
Investigator(s): Francis E. Lord, Ph.D., Director of Special Education Center, Department of Special Education, California State College, Los Angeles, Calif. 90032.
Cooperating group(s): Rehabilitation Services Administration, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.
Publications: Limited number of copies of report available from Dr. Lord.

24-GE-5 NEUROPSYCHOLOGICAL DEVELOPMENT AND OPEN HEART SURGERY

Purpose: To continue to assess the beneficial and/or deleterious effects upon the maturing central nervous system of cardiac surgery, with accompanying lowered body temperature and diversion of blood supply outside the body, in children with congenital heart defects; to assess the varying effects of such factors as type of cardiac abnormality, type of operation, and age of operation on brain functioning. (See Research Relating to Children, Bull. No. 20-FG-13.)
Subjects: 335 children, ages 15 months to 18 years.
Methods: Children are examined before open heart surgery by means of psychological tests, a neurological examination, and an electroencephalogram. Certain tests are repeated in the postoperative recovery period, again six months after surgery, and at yearly intervals thereafter.

Extensive medical and developmental histories are also available. Psychological test battery includes a measure of general intelligence (Stanford-Binet or Wechsler Intelligence Scale for Children), the Draw-a-Man Test, the Bender Gestalt Test, and a behavior rating scale.
Findings: The majority of the children have normal intelligence. However, the girls tend to be somewhat deficient in verbal skills, and an unusually large number are relatively immature in visual-motor perception. Very few positive neurological findings have been reported. A somewhat larger proportion than would be expected of abnormal EEG's have been noted.
Duration: January 1962-continuing.
Investigator(s): Knox H. Finley, M.D., Director, Institute of Neurological Sciences, Pacific Medical Center, San Francisco 94115; and Marjorie P. Honzik, Ph.D., Research Psychologist, Institute of Human Development, University of California, Berkeley, Calif. 94720.
Cooperating group(s): Heart Research Institute, Institute of Medical Sciences, Pacific Medical Center, San Francisco; National Heart Institute, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Journal articles in preparation.

24-GE-6 A PARENT-CENTERED PROGRAM FOR PRESCHOOL DEAF CHILDREN

Purpose: To demonstrate the value of early parental training and the effect of parental attitudes in the preschool instruction of the congenitally deaf child.
Subjects: 43 families with deaf children.
Methods: During the first semester, families attend two half-hour sessions weekly during which the child receives individual tutoring, while the parent observes and maintains notes of activities. Tutor and parent discuss child's program and behavior, and contrast, through enrollment of a hearing child, behavior due to deafness. Later in the semester, parent administers instructions and therapy to the child and, in the second session, participates in discussions. During the second semester the parent, under guidance, tutors the child and is evaluated and instructed on her merits or shortcomings. Evaluation of parental attitudes through the PARI Scale and a comparison of two groups--parent teaching own child or another child--are reviewed by staff. Longitudinal study of program's effects follows on a yearly basis.
Duration: September 1966-May 1969.
Investigator(s): David Luterman, Emerson College, Boston, Mass. 02116.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-GE-7 CHILD AMPUTEE PROSTHETICS PROJECT

Purpose: To conduct the field evaluation and complete the development of (1) a terminal device design, (2) a unitized passive above-elbow unit, (3) an all-plastic wrist unit, and (4) an electric cart; to investigate the areas of research and development needed in other upper and lower extremity prosthetic fabrication techniques and components. (See Research Relating to Children, Bull. No. 18-T-45.)
Duration: July 1967-October 1969.
Investigator(s): Arthur J. Moss, M.D., Chairman, and Yoshio Setoguchi, M.D., Project Medical Director and Associate Physician, Department of Pediatrics; William J. Mullally, M.D., Research Orthopedics Surgeon, and Clinical Instructor, Department of Surgery, University of California School of Medicine, Los Angeles, Calif. 90024.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

Mentally Retarded

24-HA-1 THE INCIDENCE OF MENTAL RETARDATION: A PILOT STUDY

Purpose: To study the prevalence and distribution of mental retardation as related to social and demographic variables; to study its psychological and sociological nature.
Subjects: The 610 inhabitants of two villages in Prince Edward Island, Canada.
Methods: Each subject is individually interviewed and administered a variety of psychological tests including the Goodenough-Harris Drawing Test, subtests of the WISC, The Vineland Social Maturity Scale, and measures of affect, verbal hostility, and socialization. Family, life history, and demographic data such as age, religion, sex, and rural or urban residence are collected.
Duration: February 1968-continuing.
Investigator(s): C. W. Portal-Foster, Ph.D., Director, D. Susan Butt, Ph.D., and Douglas L. Tate, M.A., Research Branch, Canadian Welfare Council, 55 Parkdale Ave., Ottawa 3, Ontario, Canada.
Publications: Two reports available from Canadian Welfare Council; additional publications planned.

24-HA-2 A SAMPLING OF NARC MEMBERSHIP OPINION REGARDING CRITICAL ISSUES IN MENTAL RETARDATION

Purpose: To estimate the consensus and range of opinions of the membership of the National Association for Retarded Children regarding three main issues which constituted the theme of the 1967 National Convention: (1) can ARC's effectively reach the underprivileged or socially disadvantaged?, (2) can ARC's divest themselves of services and survive?, (3) can the needs of the mentally retarded be met through generic services or will they be submerged and neglected?
Subjects: An estimated 800 members of NARC, many of whom are parents or guardians of retarded children.
Methods: A questionnaire was administered to the NARC membership following a series of discussions of the three main issues. Data from the instrument were analyzed at the University of Oregon Computing Center. Opinions were evaluated according to several sets of demographic and personal criteria. Other analyses evaluated such factors as range and quality of services as a function of geographic area, etc.
Duration: August 1967-January 1968.
Investigator(s): Gordon Mullenix, M.S., Research Assistant, and James E. Crosson, Ed.D., Director of Research, Research and Training Center in Mental Retardation, University of Oregon, Eugene, Ore. 97403.

24-HA-3 FORTY-YEAR FOLLOWUP OF MENTAL RETARDATES

Purpose: To investigate the careers of individuals diagnosed in childhood as mentally retarded.
Subjects: 54 the first year; 600 the next three years.
Methods: Persons in "opportunity rooms" with I.Q.'s of 70 or less in the 1930's are located, interviewed, and tested. A group of their spouses, siblings, and children will also be seen.

Duration: February 1968-May 1971.
Investigator(s): Robert T. Ross, Ph.D., Director of Research, Fairview State Hospital, Costa Mesa, Calif. 92626.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Report of first year pilot study in preparation, 1969.

24-HB-1 A CENSUS-GENEALOGICAL ANALYSIS OF CULTURAL FAMILIAL MENTAL RETARDATION

Purpose: To develop research strategies incorporating anthropological methodology; to refine research techniques, train assistants, and collect orienting data.
Subjects: Mentally retarded young adults, ages 16 and over, receiving training in vocational, social, and home management skills at the Pearl Buck Center, Eugene, Ore.
Methods: Procedures were initiated among the families of subjects available at the Pearl Buck Center. Evaluations of the several data collection strategies were made in regard to the unique interview characteristics of the pilot sample. Refinements, adjustments, or substitutions of standard anthropological procedures were effected as indicated. While essentially none of the pilot subjects was classifiable as cultural familial mentally retarded, existing relationships between the Research and Training Center and Pearl Buck Center provided access to families under mutually supportive and professionally controlled conditions.
Duration: July 1967-January 1968.
Investigator(s): Arthur Perlin, B.A., Research Assistant, Research and Training Center in Mental Retardation, University of Oregon, Eugene, Ore. 97403.

24-HC-1 WORD ASSOCIATION NORMS: ADOLESCENT RETARDATES

Purpose: To obtain word association norms for middle and high grade mental retardates, and to compare the obtained norms with each other and with corresponding norms obtained for normal children by Palermo and Jenkins (see Research Relating to Children, Bull. No. 14-E-6) to determine how sex, mental age, I.Q., and chronological age affect word association.
Subjects: 1,000 institutionalized retardates: 100 boys and 100 girls at each of the ages 11, 13, 15, 17, and 19.
Methods: The stimuli were the 200-word list used by Palermo and Jenkins, the Kent-Rosanoff list, plus 100 additional words. Subjects were tested individually by the oral presentation method. Experimenter read the stimulus words to subject who responded with the first word he thought of. Experimenter recorded each response.
Findings: Data being analyzed.
Duration: July 1966-July 1969.
Investigator(s): Herman H. Spitz, Ph.D., Director of Research, and Irma R. Gerjuoy, Ph.D. (deceased), Research Scientist, E. R. Johnstone Training and Research Center, Bordentown, N. J. 08505.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Final report, July 1969.

24-HC-2 DEVELOPMENT OF A TECHNIQUE FOR THE ANALYSIS OF BEHAVIORAL TRANSACTIONS IN NATURAL ENVIRONMENTS

Purpose: To investigate the behavior of mentally retarded young adults in a school workshop setting in order to (1) test and further develop a transactional analysis instrument and (2) assess behaviors related to their vocational and social adjustment.
Subjects: Mentally retarded young adults, age 16 and over, receiving training in vocational, social, and home management skills at the Pearl Buck Center, Eugene, Ore.
Methods: Continuing data will be collected in terms of (1) behavior, (2) direction of behavior, (3) respondent to the behavior, and (4) consequence of behavior (or reinforcement). Analyses of the data will be made to determine the range and types of contingencies operating in regard to the adaptation of the retardate to the specified environments. From these analyses, preliminary definitions of "critical behavior" will be developed. Concomitant studies will be made of the effects of observers upon the recording environment and the determination of optimal recording intervals with regard to obtainment of maximally descriptive data.
Duration: October 1967-September 1968.
Investigator(s): James Crosson, Ed.D., Director of Research, Research and Training Center in Mental Retardation, University of Oregon; and Ed Shiman, M.S., Social Worker, Lane County Mental Health Clinic, Eugene, Ore. 97401.

24-HC-3 WORD ASSOCIATION NORMS FOR THE RETARDED

Purpose: To establish retardate norms for the Palermo-Jenkins modification of the Kent-Rosanoff Word List.
Subjects: 200 borderline and 200 mildly retarded subjects, 50 each at ages 8, 11, 14, and 17. All are noninstitutionalized cultural familial retardates.
Methods: Associations to the 200-word Palmermo-Jenkins list will be obtained from each child individually. Each will be exposed to 10 test sessions over a period of 10 weeks. Twenty words will be presented during each test session.
Duration: December 1967-June 1970.
Investigator(s): Herbert J. Prehm, Ph.D., Director, Research and Training Center in Mental Retardation, University of Oregon, Eugene, Ore. 97403.

24-HC-4 DEVELOPMENT OF THE OBJECT CONCEPT IN SEVERELY AND PROFOUNDLY RETARDED CHILDREN

Purpose: To obtain longitudinal and cross-sectional data on the development of the object concept (normally achieved during the first two years of life) in severely and profoundly retarded young children.
Subjects: All residents of Central Wisconsin Colony, ages one to five, who, upon preliminary screening, were found able to visually follow a slowly moving stimulus and to grasp on sight.
Methods: The items used were adapted from Piaget's work by Gouin-Décarie (1965) and represented object concept Stages III through VI(b). Children were tested individually in a play situation, with each item being repeated until a pass or fail could be scored. Testing continued until the series of seven items was completed, or until the child failed two consecutive items. Children whose behavior was inconsistent, or whose

attention span was short, were seen a second time. Each child will be classified according to the stage of object concept behavior shown, and the modal stage level in each of the five C.A. groups will be compared. Those children who failed to attain Stage VI(b) will serve as the longitudinal sample, and will be retested at monthly intervals for the next year, or until they attain the final object concept stage.
Findings: Of 122 children seen initially, only 50 passed the preliminary screening. Initial object concept testing showed the following cross-sectional pattern: none of the children in Groups 1 and 2 (ages 1 to 1-11 and 2 to 2-11) succeeded in passing all items, while in Groups 3 through 5, percent showing object concept was inversely related to C.A. Further analysis of the role of M.A. and/or diagnosis in these group differences is planned.
Duration: May 1968-August 1969.
Investigator(s): M. Judith Wohlhueter, M.A., Research Analyst, and Ronald M. Sindberg, Ph.D., Department of Behavioral Science Research, Central Wisconsin Colony and Training School, Madison, Wis. 53704.
Publications: Information will be available from Mrs. Wohlhueter.

24-HE-1 STUDIES IN PAIRED-ASSOCIATE LEARNING: AN INVESTIGATION OF THE EFFECTS OF TWO METHODS OF ORIGINAL LEARNING ON RETENTION

Purpose: To compare two methods of learning on both learning and retention scores of mentally retarded and normal children.
Subjects: 40 retarded children with I.Q.'s between 50 and 85, and 40 normal children with I.Q.'s between 90 and 110, all from the Eugene and Springfield, Ore. public schools.
Methods: Subjects were run to a learning criterion using either the Method of Adjusted Learning or the Method of Equal Amount Learned (Gillette, 1936). Retention was assessed by recall and relearning scores after a 24-hour period. Analysis of covariance was used in a 2x2 design.
Duration: September 1966-September 1968.
Investigator(s): Herbert J. Prehm, Ph.D., Director, Research and Training Center in Mental Retardation, University of Oregon, Eugene 97403; and Ray D. Stinnett, Ed.D., Assistant Professor, Eastern Oregon College, La Grande, Ore. 97850.
Cooperating group(s): Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.
Publications: Final report upon completion of project.

24-HE-2 STUDIES IN PAIRED-ASSOCIATE LEARNING: ROTE LEARNING PERFORMANCE OF RETARDED AND NORMAL SUBJECTS

Purpose: To compare the rote learning performance of retarded and normal children during the response learning and associative hook-up stages of paired-associate learning; to analyze types of errors made by retardates, and to determine if the performance deficit exhibited by them occurs during the early or later stages of the learning process.
Subjects: 40 retarded children from junior and senior high school EMR classes, and 40 nonretarded children from intermediate and junior high school regular classes.
Methods: Children were tested individually in a distraction-free room within their local school. The paired associates list was comprised of 8 or 10 pairs of nonmeaningful (to control for previous experience) paired associates. The criterion of learning was three consecutively correct responses. The list was learned using the method of adjusted learning.
Duration: October 1967-February 1969.
Investigator(s): Herbert J. Prehm, Ph.D., Director, Research and Training Center in Mental Retardation, University of Oregon, Eugene, Ore. 97403.

24-HE-3 AN ANALYSIS OF THE GENERALIZABILITY OF SENSORIMOTOR TRAINING

Purpose: To evaluate the generalizability of Kephart's sensorimotor training system, a perceptual-motor training regime for the treatment of learning disorders (see Research Relating to Children, Bull. No. 17-K-2); specifically, to test null hypotheses that sensorimotor training does not promote generalized body image development or various higher level abilities, that the effects of gross sensorimotor training do not generalize to finger localization, and that attention-comparison control procedures have no effect on any performances measured by the various scales.
Subjects: 59 moderately and severely retarded institutionalized males, ages 9 to 15.
Methods: Boys were randomly selected, matched on the basis of diagnosis, age, and I.Q., and divided into one experimental and two control groups. Experimental group underwent a program of Kephart sensorimotor training, one control group was used to determine effects of "attention motivation", and second control group received no treatment. Test battery, consisting of Eye, Hand, and Ear Test, Personal Orientation Test, Bender Gestalt, WISC, Finger Localization Test, and Purdue Perceptual-Motor Survey, was administered and results determined by analysis of variance and t tests.
Findings: Results indicate that sensorimotor training does promote body image development but does not demonstrate generalizability to higher level abilities, including general intelligence, or to finger localization. Data also clarify the specific role played by the "attention-training" which occurs in sensorimotor training. Results demonstrate significant generalized effects from attention-reinforcement control procedures.
Duration: February-July 1968.
Investigator(s): Michael P. Maloney, Ph.D. Candidate, Psychologist, Thomas S. Ball, Ph.D., Chief Psychologist, and Clara Lee Edgar, Ph.D., Psychologist, Pacific State Hospital, Pomona, Calif. 91766.
Publications: Article to be submitted to American Journal of Mental Deficiency.

24-HF-1 LONG-TERM TREATMENT OF PHENYLKETONURIA

Purpose: To obtain data on proper diagnosis and definitive treatment for children with classical phenylketonuria, hyperphenylalaninemia, transient tyrosinemia, transient hyperphenylalaninemia, and untreated phenylketonuria.
Subjects: More than 50 patients under study from varying periods up to age 12.
Methods: The diagnosis of phenylketonuria or any of the spectrum of diseases which have hyperphenylalaninemia as one of the laboratory findings has utilized loading tests on the parents to define the heterozygote state, to follow up the diet of children on treatment, and other psychological, social, and biochemical studies.
Findings: It is clear that phenylketonuria diagnosed early leads to prevention of mental retardation.
Duration: July 1967-continuing.
Investigator(s): Harry A. Waisman, M.D., Ph.D., Professor of Pediatrics, Kennedy Laboratory, Children's Hospital, University of Wisconsin, Madison, Wis. 53706.
Cooperating group(s): Mental Retardation Center, University of Wisconsin.
Publications: A 10-year long-term followup report in preparation, 1968.

24-HF-2 HISTIDINEMIC-LIKE BEHAVIOR IN CHILDREN RECOVERED FROM KWASHIORKOR

Purpose: To test the hypothesis that, because of biochemical similarities found among children with frank kwashiorkor and chronically malnourished mothers and those found among children with PKU and histidinemia, children recovered from infantile protein malnutrition should show, as a part of their mental retardation behavior, symptoms similar to histidinemia, consisting of depressed haptic function, depressed auditory memory, normal audiograms, and visual-cortical tracking ability.
Subjects: 42 children, ages 4 to 15, recovered from kwashiorkor, and 248 controls matched for age, both urban and rural samples.
Methods: Child receives physical examination, history is taken, and a battery of tests is administered. Tests consist of audiograms, oral stereognosis (visual and haptic recognition of forms developed by James Bosma, 1965), visual tracking (visual signal input imitated by child), random number series, and test phrases, repeated and recorded for error scoring. Error scoring curves were developed for each subpopulation and analyzed by parametric and nonparametric scoring procedures.
Findings: Recovered children did show histidinemic-like symptoms.
Duration: May 1967-December 1969.
Investigator(s): Carl J. Witkop, D.D.S., M.A., Professor and Chairman, Human and Oral Genetics, School of Dentistry, and Roberto Umana, M.D., Ph.D., Associate Professor of Biochemistry, University of Minnesota, Minneapolis, Minn. 55455; Gilda Baldizon, M.S., Speech Pathologist, Guatemala City, Guatemala.
Cooperating group(s): Ford Foundation.
Publications: In *Oral Sensation and Perception*, James Bosma (Ed.). Springfield, Ill.: Charles C. Thomas, 2nd ed., in press, 1968.

24-HG-1 SPEAKING FUNDAMENTAL FREQUENCY (SFF) CHARACTERISTICS OF CHILDREN WITH MONGOLISM

Purpose: To compare speaking fundamental frequency (SFF) characteristics of normal and mongoloid children.
Subjects: Five- and six-year-old mongoloid children; control group of 66 normal speaking children matched for age and sex.
Methods: Samples of spontaneous speech of each child were tape recorded. Samples are being analyzed for mean, standard deviation, and range of SFF by means of the Fundamental Frequency Indicator (1963).
Findings: Normative SFF data have been derived for five- and six-year-olds.
Duration: June 1967-June 1969.
Investigator(s): Bernd Weinberg, Ph.D., Director, Speech Research Laboratory, Indiana University Medical Center, Indianapolis, Ind. 46202.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: *Journal of Speech and Hearing Research*, 1969.

24-HG-2 A PROGRAM OF ENVIRONMENTAL ENRICHMENT FOR YOUNG CHILDREN WITH DOWN'S SYNDROME

Purpose: To demonstrate on a pilot project basis the feasibility of an early enrichment program for children with Down's syndrome in a group setting.

Subjects: Seven children with Down's syndrome but no major medical problems, initially selected at ages 6 to 18 months, all of whom were institutionalized before age six months.
Methods: An adaptation of a research ward was used. Stimulation programs were carried out in both fine and gross motor activities, adaptive behavior, and language and speech stimulation.
Findings: After 18 months the development of these children has been above what would be expected for a residential setting.
Duration: January 1967-September 1968.
Investigator(s): Robert B. Kugel, M.D., Foundation Professor of Pediatrics, University of Nebraska Medical Center, Omaha, Neb. 68105.
Cooperating group(s): Beatrice State Home; National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-HG-3 RECURRENCE RISK FOR DOWN'S SYNDROME IN THE STATE OF WASHINGTON

Purpose: To determine the empiric risk for a second affected child in families which have had a case of Down's syndrome occur in the sibship.
Subjects: Cases of Down's syndrome and their families, both in and out of the State of Washington institutions.
Methods: A questionnaire was sent to each identified family requesting information on maternal age, birth dates of all siblings, and the occurrence of known mental retardation or mongolism in first and second degree relatives.
Duration: 1964-continuing.
Investigator(s): Horace C. Thuline, M.D., Research Director, Rainier School, Buckley, Wash. 98321.
Cooperating group(s): Washington Association of Retarded Children.

24-HH-1 RESEARCH IN REMEDIAL GUIDANCE OF YOUNG RETARDED CHILDREN

Purpose: To develop preschool procedures and materials which are remedial in that they weaken behaviors which interfere with preacademic and academic behavior, and which are preventive in that they strengthen behaviors which facilitate and maintain such desirable behaviors.
Subjects: Children, ages 4 to 8, who are retarded or are not progressing academically.
Methods: Individual organism designs, in which the child serves as his own control; qualified words of academic and social performance.
Duration: September 1968-August 1971.
Investigator(s): Sidney W. Bijou, Ph.D., Professor of Psychology; Thomas E. Sajwaj, Ph.D., Research Assistant, and Mary Grace Meier, M.A., Head Teacher, Child Behavior Laboratory, University of Illinois, Champaign, Ill. 61820.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Journal publications planned.

24-HH-2 FIELD TRIALS OF A NEW PROCEDURE FOR TOILET TRAINING

Purpose: To make toilet training an easier task by instituting a training regimen in which the necessary discriminations are learned in a sequence similar to the criterion toileting behavior.

Subjects: Nine mentally retarded children, without speech, ages four to nine.
Methods: An electronic signal generator was worn by each trainee. The signal emitted was coterminous with the flow of urine. At the onset of the signal a training trial was initiated which required a trainer to intervene to terminate urine flow and to reinitiate the flow at the commode. The child was free to move about until a training trial began, at which time the child stopped urinating, ran to the commode, and completed urination there. Children were induced to drink large amounts of liquids.
Findings: Criterion behavior including clothing manipulation was achieved in periods of time ranging from 5 to 22 days. In each case the behavior was autonomous, requiring no cues from the trainer.
Duration: 1964-continuing.
Investigator(s): R. Keith Van Wagenen, Ph.D., Associate Professor of Educational Psychology, and Lee Meyerson, Ph.D., Professor of Psychology, Arizona State University, Tempe, Ariz. 82581. (Reported by Dr. Thomas H. Metos, Bureau of Educational Research, Arizona State University.)
Cooperating group(s): Mesa, Ariz. Association for Retarded Children.
Publications: Submitted to Journal of Experimental Child Psychology.

24-HH-3 BEHAVIORAL CHANGES IN EATING SKILLS IN SEVERELY AND PROFOUNDLY MENTALLY RETARDED GROUPS

Purpose: To modify and improve eating behaviors of institutionalized retardates, and to systematically measure changes in these behaviors; secondarily, to improve dressing and toileting behaviors.
Subjects: 31 males and 32 females, ages 6 to 26, 42 profoundly retarded, 20 severely retarded, and 1 moderately; control group of 8 females and 7 males.
Methods: Pre- and posttests of functional independence and socially adaptive behaviors were given, using the Central Wisconsin Colony Scales of Adaptive Behavior. Staff of 21 aides was supplemented by 12 nursing care personnel with special training in applying behavioral modification techniques and providing a generally supportive milieu. Learning theory and reinforcement techniques were utilized over a six-month period, with intensive training in eating behaviors, and secondary consideration given to dressing, toilet training, and grooming behaviors. Analyses of variance tested overall treatment effects by measuring behavior changes, and changes were compared with those in untreated control group.
Findings: Data indicated fairly clearcut measure of improvement in eating skills in such specific areas as "fed by assistance", "fed with or without assistance", and "unassisted eating". Positive findings were also obtained in dressing skills, but because of the short duration of treatment, there were no changes in toileting skills beyond chance levels.
Duration: 1968.
Investigator(s): Earl E. Balthazar, Ph.D., Director, and George E. English, M.S., Department of Behavioral Science Research, Central Wisconsin Colony and Training School, Madison 53704; Arthur C. Nelson, M.S., Superintendent, Northern Wisconsin Colony and Training School, Chippewa Falls, Wis. 54729.
Cooperating group(s): Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Data available on request.

24-HH-4 OBJECTIVE MEASURES OF EARLY CHANGES IN BEHAVIOR IN AN INTENSIVE CARE PROGRAM

Purpose: To evaluate initial treatment effects of an intensive care institutional program by measuring behavioral changes.
Subjects: 16 children ranging from profoundly to severely mentally retarded, chosen at random from among the 40 children at Central Wisconsin Colony and Training School who presented the greatest difficulty in nursing and social management on the wards.
Methods: Children were randomly divided into an experimental unit, which was given intensive general nursing care treatment, and a control group, which remained on the home ward. Treatment in the experimental group was initially rendered on an emotionally accepting, moderately passive milieu basis, and was designed to provide individual opportunities for external stimulation. Learning theory and reinforcement techniques were utilized along with "nurturant nursing". Children were pretested and posttested three months after treatment had begun, on the Central Wisconsin Scales of Adaptive Behavior, "Social Behaviors" section. Scores were factor analyzed, and 15 factors, ranging from rudimentary to complex types of social behavior, were obtained. A repeated 2x2 analysis of variance design was used to test the overall treatment effects between the two groups.
Findings: Experimental group showed improvement in nonverbal levels of communication and in interpersonal activities when compared to the control group. Measured changes in adaptive social behavior were on the whole highly significant, or showed marked tendencies toward significance. Effects of the nursing program were clearly demonstrated in providing the predicted changes in behavior.
Duration: Not reported.
Investigator(s): Ronald M. Sindberg, Ph.D., Earl E. Balthazar, Ph.D., Director, and George E. English, M.S., Department of Behavioral Science Research, and Patricia McNelly, R.N., Central Wisconsin Colony and Training School, Madison, Wis. 53704.
Cooperating group(s): Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Data available on request.

24-HI-1 A STUDY OF THE EFFECTS OF AN INTENSIVE TRAINING PROGRAM ON THE MOTOR SKILLS OF YOUNG EDUCABLE MENTALLY RETARDED CHILDREN

Purpose: To develop motor skills in mentally retarded children which will facilitate their acceptance in play activities and social success in childhood; to provide greater vocational choice in later life.
Subjects: Experimental and control group of educable mentally retarded children; normal children.
Methods: Motor skills necessary for the mastery of games played by children, ages 4 to 10, were identified and a program suitable to training the mentally retarded child in these skills was devised, with the development of new training techniques when necessary. Training program was administered to experimental group. Pre- and posttest measures of motor ability and specific motor skills were obtained for experimental and control groups to test effectiveness of program. Specific motor skills of normal children were measured to provide information on the level of competence the retarded child might obtain.
Duration: December 1966-December 1968.
Investigator(s): Sheila A. Ross, Ph.D., Senior Research Associate, Palo Alto Medical Research Foundation, Palo Alto, Calif. 94301.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: American Journal of Mental Deficiency, 1969.

24-HK-1 MEASUREMENT OF PARENTS' PERCEPTIONS OF THEIR CHILDREN'S DEVELOPMENT

Purpose: To develop techniques which quantify variables believed to be important in working with parents of retarded children.
Subjects: 190 parents of 117 children seen at a handicapped children's clinic.
Methods: A number of techniques were piloted which elicit, quantify, and validate parental perceptions of their children's current and future behavioral attainments.
Findings: Two reliable measuring techniques were identified which assess parents' realism in perceiving their children's current development and likely future attainments. Preliminary findings employing these techniques with parents of retarded children are reported.
Duration: June 1965-continuing.
Investigator(s): Wolf Wolfensberger, Ph.D., Associate Professor of Medical Psychology and Mental Retardation Research Scientist, Nebraska Psychiatric Institute, University of Nebraska Medical Center, Omaha, Neb. 68105; Richard A. Kurtz, Ph.D., Associate Professor of Sociology, University of Notre Dame, Notre Dame, Ind. 46556.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, and National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Genetic Psychology Monographs, in press, 1968.

Emotionally Disturbed and Mentally Ill

24-JA-1 MENTAL HEALTH SCREENING AND FOLLOWUP OF PRESCHOOL CHILDREN

Purpose: To determine an adequate method of screening the mental problems of preschool children and to learn the prognosis of the main problems.
Subjects: 100-500 three-year-old children.
Methods: Children are studied through direct observation and tests. Questionnaires are administered to parents to provide information on family background and the individual child. Studies will be repeated once or twice each year.
Duration: April 1968-continuing.
Investigator(s): Keiichi Mizushima, Ph.D., Professor of Psychology, and Yutaka Akiyama, M.A., Research Assistant, Rissho Women's University, Minami-Ogishima, Koshigaya, Saitama-Ken, Japan.

24-JB-1 PARENTAL IMAGERY IN EMOTIONALLY HANDICAPPED CHILDREN

Purpose: To determine the characteristics of father imagery and mother imagery in emotionally disturbed children; to establish an effective imagery test as a projective technique.
Subjects: Emotionally disturbed grade school children; control groups of normal children.
Methods: Children's backgrounds are studied, and a parent-child version of the imagery test developed by investigators is administered.
Duration: November 1968-September 1970.
Investigator(s): Keiichi Mizushima, Ph.D., Professor of Psychology, and Shoji Yabuki, M.A., Research Assistant, Rissho Women's University, Minami-Ogishima, Koshigaya, Saitama-Ken, Japan.
Cooperating group(s): Research Division, Tokyo Institute of Clinical Psychology.
Publications: Japanese Journal of Clinical Psychology 8, 1969.

24-JB-2 DRUG USE IN PSYCHIATRIC PATIENTS

Purpose: To determine the relationship of social, psychological, and psychiatric factors to the frequent use of potentially habituating and addictive drugs among a young psychiatric population.
Subjects: All consecutive admissions, ages 15 to 25, to Hillside Hospital: 100 drug users and control group of 100 nondrug users matched for age, sex, and middle class socioeconomic background.
Methods: Questionnaire and interview with patient and parents provide data on life style and behavior prior to use of drugs and after initial drug use but prior to hospitalization. Patients are evaluated while in the hospital through use of sociometric techniques, observations, and ratings by doctors and nurses. A six-months' posthospitalization follow-up interview is held with patient and/or family.
Findings: Of 40 patients studied thus far, 24 have a history of drug abuse. The drug users appear to have character disorders, while nondrug users show a higher incidence of schizophrenia.
Duration: May 1968-April 1971.
Investigator(s): Melvin Cohen, Ph.D., Research Associate, Research Department, Hillside Hospital, Glen Oaks, N. Y. 11004.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Either several articles in psychological and psychiatric journals or one monograph.

24-JB-3 FAMILY ART DIAGNOSIS AND EVALUATION

Purpose: To assess the use of a conjoint family art structured task for determining the nature of family information and for measuring change in family interaction.
Subjects: 15 families have been evaluated to date with a planned total of 50. Families are drawn from outpatient clinic of McLean Hospital.
Methods: A family interview is followed on another occasion by a family art evaluation. The family art evaluation is repeated in six months. Both the family interview and family art evaluation are evaluated on a common set of dimensions as well as dimensions unique to each approach.
Findings: Tentative findings show that the family art method adds significant information to understanding family dynamics, which is not generally obtained from a family interview. The family art method holds promise as a method for assessing change in family interaction.
Duration: September 1967-continuing.
Investigator(s): Marvin Snider, Ph.D., Associate Psychologist, McLean Hospital, 115 Mill St., Belmont 02178, and Research Associate, Department of Psychiatry, Harvard Medical School, Boston, Mass. 02115.
Publications: Publication planned.

24-JB-4 SOCIAL AND PSYCHOLOGICAL CORRELATES OF EMOTIONAL DISTURBANCE AMONG BROWN COUNTY GUIDANCE CLINIC CLIENTS

Purpose: To determine and evaluate the importance of social and psychological factors in emotional disturbance, and to correlate these factors with length, type, and effectiveness of treatment.
Subjects: All clients through age 18 at the Brown County Guidance Clinic.
Methods: Parents of each child fill in a biographical form, and therapists evaluate the child.
Duration: May 1968-continuing.
Investigator(s): Leah Abrahams, M.A., Research Analyst, Brown County Guidance Clinic, 100 N. Jefferson, Green Bay, Wis. 54301.

24-JB-5 A STUDY OF THE PROBLEMS IN GROWTH AND ADAPTATION IN THE PERSONALITY DEVELOPMENT OF THE ADOLESCENT

Purpose: To study the dynamic and formal regularities in the family system and the impact of these upon individual development, particularly in adolescence; specifically, to define characteristics of interaction and individual behavior which provide evidence of identification and delineation and to formulate the interplay between these two processes and their importance in the final determination of ego identity in adolescence.
Subjects: Five families selected from a series of 40 which were representative of a range of adolescent emotional disturbance.
Methods: Observation and psychological testing of families.
Duration: 1960-continuing.
Investigator(s): Roger L. Shapiro, M.D., Chief, Section on Personality Development, Adult Psychiatry Branch, National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Md. 20014.
Publications: Psychiatry, 1963; others.

24-JC-1 FOLLOWUP STUDIES OF SUICIDAL COMMUNICATION

Purpose: To determine the immediate and long-term relationship of suicidal communications, attempts, and acts to the types and symptoms of psychiatric illness, the clinical course over a period of years, and social factors in the lives of the patients; to compare and contrast adolescent and adult psychiatric patients, both initially and at followup, with respect to suicidal communication and behavior and to the clinical and sociological settings in which such communication occurs; to study the effect of various types of psychiatric treatment on suicidal communication and behavior and on the outcome of illness; to seek more effective means of preventing suicide by learning more about the clinical and sociological determinants of suicidal behavior.
Subjects: Adolescent psychiatric inpatients; psychiatric patients hospitalized eight years previously at an average age of 45.
Methods: Adolescents were studied initially and are being followed longitudinally with regard to the clinical picture and the presence or absence of suicidal communication; adults were evaluated at time of hospitalization and are also being followed with regard to the same factors.
Duration: Not reported.
Investigator(s): Richard W. Hudgens, M.D., and Marijan Herjanic, M.D., Assistant Professors, and Philip I. Woerner, M.D., Instructor, Department of Psychiatry, Washington University School of Medicine, St. Louis, Mo. 63110.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-JE-1 SYSTEMATIC OBSERVATIONS OF AUTISTIC BEHAVIOR

Purpose: To determine effects of social isolation over a prolonged period of time on children suffering from early infantile autism; to learn whether bizarre behavior manifested in the presence of examiners would persist when the children were alone.
Subjects: 6 autistic children and 1 child with Down's syndrome.
Methods: The children were placed in a sound attenuated room for a period of six hours, the only intervention being to feed them lunch

during the middle of the session. They were observed for specific autistic behaviors, particularly hand flapping. The frequency and duration of occurrence of these behaviors were recorded on a multiple event recorder.
Findings: The peaks of autistic activity were found to occur at random intervals, and there was no evidence of periodic or cyclic patterning. Although moment to moment variation was often considerable, the average amount of the behavior over prolonged periods of time was relatively consistent.
Duration: 1964-1968.
Investigator(s): Arthur D. Sorosky, M.D., Edward M. Ornitz, M.D., Morton B. Brown, Ph.D., and Edward R. Ritvo, M.D., Department of Child Psychiatry, University of California Medical Center, Los Angeles, Calif. 90024.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Archives of General Psychiatry, April 1968; further publications within the next year will deal with effects of changing environmental variables on children's behavior.

24-JF-1 SCHIZOPHRENIC PERSONALITY DEVELOPMENT

Purpose: To conduct a retrospective study of the childhood of persons who become schizophrenic as adults.
Methods: School records of children later hospitalized for schizophrenia are analyzed in order to describe and understand social behavior, school adjustment, and general character development.
Findings: Schizophrenic boys as a group are clearly different from their controls, being more disagreeable, disruptive, and scholastically unmotivated.
Duration: 1965-1970.
Investigator(s): Norman F. Watt, Ph.D., Lecturer in Clinical Psychology, Harvard University, Cambridge, Mass. 02138.
Cooperating group(s): Newton, Mass. schools; Mass. hospitals; Mass. Department of Mental Health.
Publications: Report in preparation.

24-JG-1 FOLLOWUP STUDY OF THIRTY-SEVEN FAMILIES DISCHARGED FROM THE PROJECT RELATED TO THE STUDY AND TREATMENT OF DISTURBED ADOLESCENTS AND THEIR FAMILIES

Purpose: To obtain information about the present state of previously disturbed adolescents and their families in terms of problems that motivated admission to the study and treatment project, and how each member of the family perceives the effect of therapy in relation to whatever changes may have taken place.
Methods: Interviews with various family members will isolate and identify factors related to the total therapeutic experience such as impact of hospitalization, ward milieu, family, couple, and individual therapy, and the outcomes as felt by the adolescent patient and his family; outcomes will be evaluated on the basis of a number of categories.
Duration: July 1968-July 1970.
Investigator(s): Carmen Amorós-Cabrera, M.A., Clinical Social Worker, and James Sabin, M.D., Clinical Associate, Personality Development Section, Adult Psychiatry Branch, National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Md. 20014.

24-JG-2 DEVELOPMENT OF FILIAL THERAPY: PROCESS AND CASE FACTORS

Purpose: To develop further the clinical technique and the theoretical base of filial therapy, a method for treating emotionally disturbed children by training their parents to play with them at home and under observation at the Psychological Clinic; to test hypotheses concerning the relationships among: types of parents' and children's personalities or problems; parents' ability to perform the prescribed role; process that occurs in the child's play session; and relative success achieved in bringing about positive change in the child.
Subjects: Emotionally disturbed children under age 10; their parents.
Methods: Parents are trained in therapeutic play with their children at the Clinic in groups of six to eight. Role that parent assumes in these play sessions is modeled after the role usually assumed by a client-centered play therapist. After training, the parents continue to meet with the therapist for two hours weekly to receive supervision on home play sessions and for therapeutic discussion of other problems. Course of treatment is usually 18 months or less.
Findings: Clinical experience with 12 groups who are currently engaged in or have completed treatment, and certain empirical findings, suggest that filial therapy is a promising technique in the treatment of emotionally disturbed children, and one which affords economy of professional time and resources.
Duration: September 1966-August 1969.
Investigator(s): Bernard Guerney, Jr., Ph.D., Professor of Psychology, and Director, Psychological Clinic, Douglass College, Rutgers, The State University, New Brunswick, N. J. 08903.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-JI-1 FOLLOWUP OF ADOLESCENTS FIVE YEARS AFTER ADMISSION TO A PSYCHIATRIC HOSPITAL

Purpose: To evaluate current adjustment of former psychiatric patients; to assess reactions to hospitalization experience.
Subjects: All patients, ages 13 through 19, hospitalized three months or more from September 1961 through May 1963.
Methods: Criteria for evaluation of current adjustment include symptomatology, school and work performance, and interpersonal relationships. A computer system will analyze variables under case study analysis of demographic study factors and hospitalization program. Patients and their families and/or significant professional persons are interviewed.
Duration: 1966-Spring 1969.
Investigator(s): Mollie Grob, S.M., Research Social Worker, and Golda Edinburg, M.S., Director, Department of Social Work, McLean Hospital, Belmont, Mass. 02178.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-JI-2 CHILD AND ADOLESCENT THERAPY PROJECT

Purpose: To develop (1) child and adolescent programs in the state mental hospitals in Texas, (2) a training program for resident psychiatrists, social workers, special education teachers, and child care workers, and (3) a research program; to provide a public education and consultation program as a community service.

Subjects: Children, ages 6 to 16, who are patients at Children's Psychiatric Hospital, a residential facility established as part of Austin State Hospital.
Methods: Treatment emphasizes intensive individual care for children. The daily program is structured around psychotherapy, special education, and milieu therapy. Patient's parents are actively encouraged to participate. Training in child care work, social work, special education, and psychiatry is carried out. Research in social work, psychiatry, and psychology is conducted to develop new methods in child care and to orient and train the staff in clinical research. Operant conditioning and Freudian milieu therapy are carried out in conjunction with the recreational therapy program, occupational therapy program, special education program, and various enrichment programs. Both open and closed ward care is available. Individual psychotherapy is planned for every child, and group therapy is available for children and parents. A followup study of discharged patients will give important information for evaluating various aspects of the program.
Duration: June 1966-August 1971.
Investigator(s): Willard Segerson, M.D., Superintendent, Austin State Hospital, and Director, Beverly Sutton, M.D., Codirector and Chief of Child Psychiatry, Marjorie Lawlis, M.D., Associate Director, Carole Golightly, Ph.D., Psychologist, and Margie B. Clark, M.S.S.W., Psychiatric Social Worker, Children's Psychiatric Hospital, Austin State Hospital, Austin, Tex. 78751. (Reported by Mildred Stout, Medical Secretary, Children's Psychiatric Hospital.)
Cooperating group(s): Texas Department of Mental Health and Mental Retardation; Departments of Social Work, Psychology, and Special Education, University of Texas; Texas Education Agency; Austin Independent School District; National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Article in preparation by Dr. Golightly.

24-JI-3 UNIT FOR TREATMENT OF EMOTIONALLY DISTURBED CHILDREN

Purpose: To develop and study a program of inpatient care for emotionally disturbed children.
Subjects: Nonretarded children with emotional and developmental problems.
Methods: Inpatient program is planned to correct deficiencies, supply counsel, reeducate, and prepare the children to reenter the community. The program provides medical, social, psychiatric, and psychological treatment, special and regular education classes, and planned recreation. Individual attention is given through cooperation of a Grandparent's Program for individual and group activities. Cultural deprivation, socioeconomic, educational, and motivational factors are investigated.
Findings: Older children have been assisted through rehabilitation services, and selected children have been attending public schools in Mason County.
Duration: February 1965-continuing.
Investigator(s): Kenneth N. Byrne, M.D., Superintendent, Lakin State Hospital, Lakin, W. Va. 25250.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

Socially Deviant

24-KA-1 THE SOCIOCULTURAL CONTEXT OF PREMARITAL CHILDBIRTH IN AMERICAN CITIES: AN EXPLORATORY INVESTIGATION

Purpose: To explore the social and cultural setting in which young women come to be mothers. The incidence of childbearing among American women under age 21 has been increasing. There is very little useful information on the sociocultural milieu in which teenage conception, pregnancy, and childbirth take place. There are statistical measures of the factors associated with these births, such as social status level, race, educational background, but they are inadequate in accuracy and detail.
Methods: Will employ techniques of anthropological field work, including extended case studies. Primary attention will be given to sex-role differentiation--the extent to which sexual intercourse and becoming a father or mother is an essential dimension of masculinity or femininity, other ways in which masculinity or femininity can be expressed, their relationship to each other, how they vary from one group to another, and in what ways maturation is symbolized for boys and girls in different groups.
Duration: July 1968-March 1970.
Investigator(s): David M. Schneider, Ph.D., Director, Kinship Project, and Professor, and Raymond T. Smith, Professor, Department of Anthropology, University of Chicago, Chicago, Ill. 60637.
Cooperating group(s): Center for Urban Studies, University of Chicago; Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-KC-1 JUVENILE DELINQUENCY AND URBAN AREAS

Purpose: To ascertain the relative magnitude of rates of violative behavior among young people, by areas in Chicago; to determine the stability of the ranking of areas over time; to determine the characteristics of the community which vary in incidence or magnitude with variation in rates of violative behavior; and to analyze the extent to which the rankings of areas as measured by rates of violative behavior vary with changes in communities as revealed by indexes of community stability.
Subjects: Delinquents brought to court from Chicago and selected suburbs of Cook County since 1934.
Methods: Rates of delinquents have been computed from data in Cook County Juvenile Court records and translated into indexes to facilitate comparison.
Findings: Rates of delinquents vary widely among city communities, and differences persist over time. Relative magnitude of rates in most areas remains relatively constant. Rates go up in areas badly disrupted by changing population. Rates go down as new populations become acquainted with new institutional forms.
Duration: 1943-November 1968.
Investigator(s): Henry D. McKay, M.A., Division Chief, Urban Studies, Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611.
Publications: To be published in an updated version of Juvenile Delinquency and Urban Areas, by C. Shaw and H. D. McKay. Chicago: University of Chicago Press, 1942.

24-KD-1 PILOT STUDY OF PRESCHOOL DELINQUENCY

Purpose: To document the relationship between preschool delinquent behavior and later delinquency as well as any possible relationship to later learning disabilities and psychosomatic conditions; to investigate the efficacy of early intervention per se, versus the possible need to formulate and demonstrate a special treatment technique.
Subjects: 25 untreated antisocial boys followed up after 17 years, and control group of 25 untreated neurotic boys; 30 treated antisocial boys.
Methods: Followup is done wherever possible by structured interview of parent(s) in their home. Records of local courts, Youth Service Board, clinics, and social agencies are checked and material rated for incidence of delinquency, learning disability, and psychosomatic illness. Outcome of treated and untreated boys will be compared, and an attempt will be made to correlate outcome in the treated cases with variables in the treatment and its circumstances.
Findings: Preliminary findings indicate that special techniques have to be formulated for the treatment of antisocial children. There also seems to be a positive correlation between above-average I.Q. and outcome regardless of whether the child was treated or not and regardless of initial degree of pathology.
Duration: May 1968-September 1969.
Investigator(s): Rachel M. Rosenberg, M.D., Staff Psychiatrist, James Jackson Putnam Children's Center, 244 Townsend St., Roxbury, Mass. 02121.
Cooperating group(s): The Grant Foundation.
Publications: Journal of the American Academy of Child Psychiatry 7:3, July 1968 and 2:1, January 1963; monograph, probably September 1969.

24-KD-2 ORGANIC BRAIN FACTORS CAUSING DELINQUENCY IN CHILDREN

Purpose: To determine organic brain abnormalities that may contribute to delinquency in children.
Subjects: Children studied both in hospitals and in clinical private practice.
Methods: Neurological, psychiatric, electroencephalographic, and psychological studies.
Findings: Findings to date point to serious factors as organic brain factors in numerous cases of delinquency.
Duration: 1968-1970.
Investigator(s): George N. Thompson, M.D., Secretary-Treasurer, Society of Biological Psychiatry, 2010 Wilshire Blvd., Suite 607, Los Angeles, Calif. 90057.
Publications: Will be published as a monograph.

24-KE-1 STIGMA AND DELINQUENCY

Purpose: To test a hypothesized relationship between feelings of isolation and rejection and delinquency.
Subjects: All boys confined for one week or longer at the Johnson County Juvenile Hall over a six-month period.
Methods: Minimally structured interview in which it is determined if the boys feel rejected by their nondelinquent peers, feel a "natural" affinity for other delinquents, and expect to get into further trouble.
Findings: High frequency of all three attitudes. First two attitudes predict for third (never present without first two).
Duration: August 1968-January 1969.

Investigator(s): D. F. Duncan, A.S., Research Coordinator, Students of Social Science, 12308 E. 51st St., Independence, Mo. 64055; and Supervisor, Johnson County Juvenile Hall, 905 W. Spruce, Olathe, Kan. 66061.
Publications: Publication planned as part of theoretical paper in interdisciplinary journal.

24-KE-2 PERSONALITY TRAITS AND ATTITUDES OF ADOLESCENT GIRLS WITH BEHAVIOR DISORDERS

Purpose: To explore the relationships between adolescent delinquent girls' personality traits and philosophies of human nature.
Subjects: Residents of state correctional schools in Tennessee and Florida.
Methods: Girls were administered Philosophy of Human Nature Scale, Tennessee Self-Concept Scale, Locus of Control Scale, and Junior-Senior High School Personality Questionnaire.
Findings: Girls report lower self-concepts than normally expected; those with tendencies toward disordered behavior and poor self-concept judge man in negative terms while those with positive adjustment and self-concepts have favorable attitudes toward human nature. Implications are that time served in a correctional school may serve to reinforce personal and social inadequacy.
Duration: Not reported.
Investigator(s): Wayne C. Richard, Ph.D., Assistant Professor, Department of Special Education, University of Florida, Gainesville, Fla. 32601; Catherine G. Mates, M.A., George Peabody College for Teachers, Nashville; and Laura Whitten, Tennessee Reeducation Center, Memphis, Tenn.
Cooperating group(s): John F. Kennedy Center for Research on Education and Human Development, George Peabody College.

24-KE-3 VERBAL BEHAVIOR IN A JUVENILE DETENTION HOME

Purpose: To study the social consequences affecting verbal behavior in a juvenile detention facility; to determine whether these peer group social consequences may contribute to formation of delinquent behavior patterns.
Subjects: 11 juveniles in a juvenile detention home.
Methods: During sample periods of four and one-half hours a night, all statements are coded as hostile, delinquent-norm oriented, social-norm oriented, or friendly; consequences of statements are coded as reward or punishment and as verbal or nonverbal.
Findings: Delinquent verbalizations predominate. Social-norm oriented statements are verbally punished, while others are generally rewarded.
Duration: February-March 1969.
Investigator(s): D. F. Duncan, A.S., Research Coordinator, Students of Social Science, 12308 E. 51st St., Independence, Mo. 64055; and Supervisor, Johnson County Juvenile Hall, 905 W. Spruce, Olathe, Kan. 66061.
Publications: Plan to publish in *Crime and Delinquency* or *Correctional Psychologist*.

24-KE-4 A COMPARISON OF THE ATTITUDES OF DELINQUENTS AND NONDELINQUENTS TOWARD THEIR PARENTS AND OTHER ADULTS

Purpose: To study the interrelationship between attitudes toward authority figures and delinquency.

Subjects: 14 delinquents and 25 nondelinquents from two communities.
Methods: An attitude scale measuring negative or positive attitudes of adolescents toward their parents and toward adults in general was devised, and its validity and reliability established. The scale was administered to the two groups of subjects.
Findings: The delinquents showed more negative attitudes than nondelinquents on the scale and all of its subtests ($p < .005$).
Duration: Not reported.
Investigator(s): D. F. Duncan, A.S., Research Coordinator, Students of Social Science, and Supervisor, Johnson County Juvenile Hall, 905 W. Spruce, Olathe, Kan. 66061, and Nancy S. Duncan, Research Assistant, Students of Social Science, 12308 E. 51st St., Independence, Mo. 64055.
Cooperating group(s): Johnson and Jackson County Juvenile Courts, Kansas; University of Missouri at Kansas City.
Publications: Publication planned in Journal of Applied Behavior Analysis or Journal of Experimental Social Psychology.

24-KH-1 DRUG USE IN MATCHED GROUPS OF HIPPIES AND NONHIPPIES

Purpose: To gain objective insight into the etiology and nature of drug abuse among alienated youth; to identify factors which differentiate between alienated and nonalienated youth.
Subjects: 200 "hippies"; matched group of "nonhippies".
Methods: Highly structured interviews, using trained interviewers, to compare the two groups.
Duration: June 1968-June 1970.
Investigator(s): Douglas Holmes, Ph.D., Director of Research, Associated YM-YWHA's of Greater New York, 33 W. 60th St., New York, N. Y. 10023.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Journal articles planned; book in preparation for publication in 1970.

24-KH-2 TEENAGERS AND DRUG ADDICTION

Purpose: To demonstrate psychotherapeutic involvement of teenagers after initial or long-term resistance to therapeutic intervention.
Subjects: Patients from four outpatient psychiatric clinics in the Southern California area.
Methods: Psychodiagnostic testing and psychotherapy, including group psychotherapy, therapy often lasting two to four years.
Duration: January 1969-January 1970.
Investigator(s): Hans A. Illing, Ph.D., Senior Psychiatric Social Worker, Parole Outpatient Clinic, State Department of Corrections, Los Angeles, Calif. 90012.
Publications: To be submitted to Journal of Criminal Law, Criminology and Police Science, and Psychoanalytic Review.

24-KP-1 REHABILITATION OF LOW INCOME NEGLECTED AND DELINQUENT CHILDREN ON PROBATION

Purpose: To open opportunities in the social structure for delinquents and their families through probation services stressing community intervention; to determine whether subprofessionals can function as probation aides; to determine whether a probation officer is more effective as a result of community intervention activities.

Subjects: Children from multiproblem families, under jurisdiction of the juvenile court.
Methods: Casework, group work family counseling, and community intervention are offered as part of probation to children and members of their families. Community organization methods are used to enhance community resources in dealing with problems of the families in this area. Active environmental manipulation serves as the matrix of all rehabilitative services.
Findings: Families and children were able to utilize resources and new opportunities opened to them. Subprofessionals made major contributions in working with families and community structures. Use of social work methods and community intervention focus altered the role of the probation officer, brought the court into new involvements, and made probation more relevant to the client's needs.
Duration: April 1967-February 1969.
Investigator(s): H. Allan Carpenter, M.A., Director, and William M. Dombrowski, M.A., Social Worker, Marquette County Family Project, County Courthouse, Marquette, Mich. 49855.
Cooperating group(s): Office of Juvenile Delinquency and Youth Development, U. S. Department of Health, Education, and Welfare.
Publications: Report available from Judge Michael F. DeFant, Marquette County Probate Court, Marquette, Mich. 49855.

24-KP-2 LAW, MENTAL DISORDERS, AND THE JUVENILE PROCESS

Purpose: To identify District of Columbia Juvenile Court problems in gaining access to rehabilitative resources for mentally disordered juvenile delinquents; specifically, to study (1) the intake process of the Juvenile Court, (2) the disposition of the mentally disordered juvenile delinquents in the Juvenile Court, (3) the role of mental disorders in the Court's decision to waive jurisdiction, (4) the legal and administrative process whereby the Juvenile Court obtains residential examination and treatment for the mentally disordered juvenile, (5) the role of the parent in obtaining treatment for the child, and (6) the treatment given a sample of juveniles at the Court's Child Guidance Clinic; to conduct a survey of mental health facilities.
Subjects: Children seen by the Child Guidance Clinic in 1966; parents.
Methods: Analysis of legal and administrative requirements; interviews with Court and agency officials; personal observations of procedures involved; examination of records of juveniles institutionalized; followup of juveniles receiving outpatient treatment.
Duration: July 1967-June 1970.
Investigator(s): Samuel Dash, LL.D., Project Director, Alice B. Popkin, Codirector and Research Director, Leonard Zeitz, Research Sociologist, Research Foundation of the D. C. Bar Association, 1819 H St., N. W., Washington 20006; and Erwin Friedman, Ph.D., Director, Jewish Foundation for Retarded Children, 6200 - 2nd St., N. W., Washington, D. C. 20001.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-KR-1 DIFFERENTIAL TREATMENT OF DELINQUENTS IN INSTITUTIONS

Purpose: To further investigate the effect on institutionalized delinquents of differential treatment programs based on the Interpersonal Maturity Level model used in the Preston Typology Study. (See *Research Relating to Children*, Bull. No. 20-KM-1.)

Subjects: 1,200 male delinquents, ages 14 to 16, in two California Youth Authority institutions with almost identical physical plants and staffing patterns.
Methods: Subjects are classified into one of six major interpersonal subtypes, placed in an eligibility pool, and randomly assigned to one of two treatment programs developed specifically for that type of delinquent. Differential treatment strategies in one institution are based on the behavioristic model (social learning theory), while the other institution uses psychodynamic concepts as a frame of reference. Evaluation includes psychometrics, and behavioral and parole followup data.
Duration: March 1968-March 1972.
Investigator(s): Carl F. Jesness, Ph.D., Senior Behavioral Research Analyst, Division of Research, California Youth Authority, 3001 Ramona Ave., Sacramento, Calif. 95826.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Youth Authority Quarterly 22, Spring 1969.

24-KR-2 THERAPEUTIC COMMUNITY AND TESTING PROGRAM FOR DRUG ADDICTS

Purpose: To determine the effectiveness of the treatment program of Daytop Village, a therapeutic community for the treatment and rehabilitation of heroin addicts. (See Research Relating to Children, Bull. No. 20-JV-1.)
Subjects: 25 to 30 males, ages 16 and up, who had a history of addiction and had been convicted by the State Supreme Court and, as a probation requirement, assigned to seek admission and cooperate with the Daytop Project at either Staten Island or Swan Lake, N. Y.
Methods: Subjects were involved in treatment program for a 12- to 18-month period involving: a large measure of self-government and indigenous leadership with a minimum of professional intervention; a status ladder system with systematic rewarding and nonrewarding elements; intensive sessions three times weekly of self-led "no holds barred" group therapy operating along the principles of reality therapy; concept meetings or seminars designed to inculcate "square" ideals as opposed to the values of the drug addict subculture and to provide practice in verbally dealing with abstract ideas; regular social meetings with representative members of the outside community; cultural and educational activities; participation in an intensive 30-hour group experience called a "Marathon Encounter" two or three times a year; a graduated plan for return to the community or as a cadre member of the facility administration; vocational guidance training; establishment of an extended family situation in the management of an institution; periodic testing by thin-layer or gas chromatography to detect the use of narcotics; and establishment of a parents' group to provide contact with and guidance for relatives of the residents. Residents were followed for two years after release and compared with a control group who received conventional probation supervision.
Duration: Not reported-December 1968.
Investigator(s): Joseph A. Shelly, Chief Probation Officer, and Alexander Bassin, Ph.D., Director of Research and Education, Probation Department, Supreme Court of the State of New York, Brooklyn, N. Y. 11201.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Final report, March 1969.

THE CHILD IN THE FAMILY

Family Relations

24-LA-1 THE EFFECTS OF MEDICATION AND FAMILY INTERACTION

Purpose: Previous research has suggested that family interaction in the laboratory, and perhaps in everyday life, is regulated by a relatively stable set of shared experiences of the family's relationship with its environment. This project was designed to test some of the determinants of these shared experiences; specifically, to determine the family's response to a radical and acute defect in problem-solving in one member.
Subjects: Small group of families acting as their own control.
Methods: On alternate nights a child in the family is given 125 mgm. of secobarbital and a placebo on a double-blind basis. The child and his parents are then tested in a card-sorting procedure. The use of a single family design is also being explored--a small group of families is tested at weekly intervals for six to eight weeks with one member receiving medication for some of those sessions on a double-blind, random basis.
Duration: June 1968-December 1969.
Investigator(s): David Reiss, M.D., Chief, Section on Experimental Group and Family Studies, Adult Psychiatry Branch, and Carl Salzman, M.D., Psychopharmacology Research Branch, National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Md. 20014.

24-LA-2 CROSS-NATIONAL RESEARCH STUDIES ON THE FAMILY

Purpose: To develop middle-range theory on the dependence-independence of the family-kinship group in societies at different levels of complexity.
Subjects: Migrant families in modernizing societies.
Methods: The theory will be tested and refined in three pilot studies in diverse cultures. Subsequent field studies will involve six or more societies. Consideration will be given to socialization of both children and adults for new roles, competence in the use of increased life options, and modernization as it affects societies, families, and individuals.
Duration: June 1968-June 1971.
Investigator(s): Marvin B. Sussman, Ph.D., Chairman, Department of Sociology, Case Western Reserve University, Cleveland, Ohio 44106.
Cooperating group(s): Family Research Committee of the International Sociological Association; International Seminar for Family Research; National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Anticipated papers will deal with the theoretical model, cross-cultural design and methodology, societal modernization, family and individual modernization, and a case study of the project.

24-LA-3 FAMILY BEHAVIORAL CORRELATES OF FAMILY PERCEPTIONS

Purpose: To determine the association between the perceptual family measures and actual family behavior, with the purpose of exploring their theoretical relationship in family dynamics and pathology, and to determine the validity of the family perception test as predictive of behavior.
Subjects: Ninth grade child and parents of 27 families.
Methods: Descriptions of the real and ideal family were obtained from the father, mother, and child. The three family members also discuss family situations through the revealed differences technique. Tape recordings of their interactions are analyzed for dominance and conflict. Independent variables are measures based on the family perceptions; dependent variables are interaction measures of dominance and conflict. The statistical analysis consists of intercorrelations and multivariate techniques.
Duration: March 1968-August 1969.
Investigator(s): Ferdinand van der Veen, Ph.D., Chief, Division of Etiology and Psychodynamics, Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611.

24-LA-4 ADJUSTMENT FACTORS IN THE FAMILY CONCEPTS OF ADOLESCENTS AND THEIR PARENTS

Purpose: To investigate the relationship between the family perceptions of adolescents and their parents in terms of the adjustment and satisfaction in the family and the congruence between the views of the family members.
Subjects: Adolescent and parents of 27 families.
Methods: Family descriptions were obtained on the fathers and mothers, and their adolescent children. It was hypothesized that the child's family adjustment and satisfaction are positively related to these variables for each parent, and to the degree of similarity between family views of the members. An item analysis of the test will reveal specific content differences between the three groups in their family concepts.
Duration: March 1968-June 1969.
Investigator(s): Ferdinand van der Veen, Ph.D., Chief, Division of Etiology and Psychodynamics, Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611.

24-LA-5 A PILOT STUDY OF LIFE CYCLE VICISSITUDES OF MOTHERS IN RELATION TO THE LEVEL OF FUNCTIONING OF THE CHILDREN

Purpose: To study mothers of adolescents; specifically, to review their experiences in mothering, the changes and vicissitudes of life in their families, the ways in which they have dealt with these at various times, and the supports and resources on which they have drawn.
Subjects: Mothers whose children are completing high school.
Methods: About 10 interviews were conducted with each mother at different stages in the study of their children (see No. 24-BA-6), and considerable material on the mothers was also obtained directly and indirectly from the children. An intensive interview is held with each mother as the child approaches completion of high school. Factors to be studied in determining mothers' quantity and quality of support for development of the child include attitude toward progress, health of mother, emotional stress, economic strain, and relation of the father to the mother and the support provided by him.

Duration: Not reported-August 1969.
Investigator(s): Lois Barclay Murphy, Ph.D., Director, and Alice Moriarty, Ph.D., Research Psychologist, Division of Developmental Research, Research Department, The Menninger Foundation, Topeka, Kan. 66601.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-LA-6 MOTHER-CHILD RESOURCE EXCHANGES AND THEIR CONCOMITANTS

Purpose: To describe mother-child interpersonal interactions, and to determine sequential constraint in the flow of these interactions; to determine whether father absence is a concomitant of variability in mother-child interaction.
Subjects: 50 lower class Negro mothers, each with one of their children, ages 5 to 12, 28 boys, 22 girls.
Methods: Mother-child interactions in a waiting room situation are systematically observed and categorized with a resource-process coding system. Father absence or presence is established through interviews and observant participation. Through use of multivariate uncertainty statistics, sequence analyses are carried out, determining constraint in immediately prior and two acts prior in the chronological sequence.
Findings: Mother-child interactions are associated with boys' identification; mother-child interaction is itself associated with father absence; there is some interaction constraint in reciprocity of mother and child's acceptances and rejections of one another's initiations.
Duration: 1960-1969.
Investigator(s): Richard Longabaugh, Ed.D., Chief, Social Science Department, McLean Hospital, Belmont 02178, and Associate in Social Psychology, Harvard Medical School, Boston, Mass. 02115.
Publications: Working paper on effects of father absence available on request; research report on interaction constraint planned.

24-LA-7 VARIETIES OF CONSENSUAL EXPERIENCE: AN EXPERIMENTAL TEST OF A MODEL RELATING FAMILY INTERACTION TO INDIVIDUAL THINKING

Purpose: To test hypotheses derived from a general model of family interaction proposed to account for the ways in which family members work together to explore and understand their environment; specifically, to test the prediction that, within each family, members will perceive the nature of a problem in the same way, but that there will be significant differences between families in this shared, consensual experience. Some families will experience a laboratory problem as an objective puzzle, with a solution governed by impersonal laws of evidence and logic and requiring accurate and inventive use of all the information available, while other families will experience the problem as a major challenge to the family's desired level of stability, and its solution will be regarded as a means for maintaining a comfortable level of cohesion and not an end in itself, in which case laws of logic and use of evidence could be suspended.
Methods: In an experimental procedure, the family's environment, problems, and capabilities were represented by a series of abstract, laboratory, pattern-recognition tasks. Parents and child were tested simultaneously in a card-sorting experiment during which each was isolated in a booth but had contact with the others by microphone.
Findings: Data confirmed most of the model's major predictions.

Duration: June 1967-June 1969.
Investigator(s): David Reiss, M.D., Chief, Section on Experimental Group and Family Studies, Adult Psychiatry Branch, National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Md. 20014.
Publications: Articles to be submitted to journals.

24-LA-8 FOOD PURCHASING PRACTICES OF FAMILIES WITH PRESCHOOL CHILDREN

Purpose: To investigate food purchasing practices of families with preschool children in order to determine possible effect of the presence of preschool children upon food buying practices; nutritional adequacy of preschool children's diets; and food purchasing patterns of young homemakers.
Subjects: Selected families were drawn from a stratified sample designed by the University of Illinois Survey Research Laboratory; 283 usable questionnaires were obtained from 380 eligible families.
Methods: Data were collected by personal interview during the spring and summer of 1966. The instrument used included questions relative to food buying practices and some factors that might affect them; extent of purchase and use of preprepared foods; and knowledge which young homemakers had regarding retail food selection. By recall, records were obtained of family food purchases for a seven-day period prior to the interview. The food consumption of one preschool child in each family was recorded for the day preceding the interview.
Duration: September 1965-July 1968.
Investigator(s): Glenna H. Lamkin, M.S., Associate Professor, and Mary Louise Hielscher, M.S., Research Assistant, Foods, Department of Home Economics, University of Illinois, Urbana, Ill. 61801. (Reported by Janice M. Smith, Ph.D., Head, Department of Home Economics.)
Cooperating group(s): This investigation is an Illinois contributing project to the North Central Regional research project NC75--factors affecting nutritional status of preschool children.
Publications: Series of papers planned.

24-LC-1 THE RELATIONSHIP OF FREQUENT FATHER ABSENCE AND HAZARDOUS DUTY ASSIGNMENT OF FATHER TO SCHOOL ACHIEVEMENT OF MILITARY DEPENDENT CHILDREN IN ELEMENTARY GRADES TWO, FOUR, AND SIX

Purpose: To determine whether frequent father absence and hazardous military duty assignments of fathers in Vietnam were significantly related to academic achievement of their dependent children; to replicate existing research studies covering the relationship of pupil mobility to school achievement.
Subjects: Approximately 1,200 students in the second, fourth, and sixth grades in two on-base schools for military dependents of the Marine Corps Air Station, Beaufort, S. C., and two public elementary schools in Beaufort.
Methods: Science Research Associates' ability-achievement tests are administered to the subjects. The tests will be electronically scored by the commercial publisher and returned. A study questionnaire, completed by the parents of the participating students, will provide information to section the achievement scores into the independent variable categories for analysis. The independent variables are father absence, hazardous duty of military father, mobility, sex, social position, race, and mental ability. The dependent variables are reading, arithmetic, and language

arts achievement scores. The analysis of variance will be used to determine if significant differences exist between the dependent and the selected independent variables. Covariate analysis will be employed to reduce error variance produced by varying pupil mental abilities.
Duration: December 1968-June 1969.
Investigator(s): Lawrence L. Oldaker, M.Ed. (Ed.D. Candidate), Superintendent, Marine Corps Air Station Grade Schools, Laurel Bay, S. C. 29902.
Cooperating group(s): College of Education, University of Georgia, Athens, Ga.; Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Dissertation Abstracts and interested professional journals.

24-LE-1 THE UNSUPERVISED CHILD OF THE WORKING MOTHER

Purpose: To evaluate the effects of maternal employment on children, with particular reference to the presence or absence of mature substitute supervision.
Subjects: The 108 fifth grade children who attended the Whittier School in North Philadelphia during the 1966-1967 school year and reported that their mothers were employed. Most of the children were Negro and of lower socioeconomic class.
Methods: Children were divided into supervised and unsupervised groups based on their reports concerning the presence or absence of mature supervision during a four-month period. California Test of Personality, California Test of Mental Maturity, Iowa Tests of Basic Skills, and the Schaefer Parent Behavior Inventory were administered and analyzed using Fisher's t and chi-square tests of significance.
Findings: Statistically significant differences indicate that in lower class Negro American families, maternal absence due to full-time employment was positively related to the social and intellectual development of their 10-year-old children. Negative effects appeared to be due to both part-time, sporadic employment and the lack of mature substitute supervision. This was particularly true of the girls in the sample.
Duration: Spring 1966-May 1968.
Investigator(s): Merilyn B. Woods, Ph.D., Lecturer, and Rachel D. Cox, Ph.D., Chairman, Department of Social Work and Social Research, Bryn Mawr College, Bryn Mawr, Pa. 19010.
Cooperating group(s): Philadelphia Board of Education.
Publications: Dissertation available from University Microfilms, Ann Arbor, Mich.

24-LG-1 SOME CONSEQUENCES OF ILLNESS IN THE LIVES OF ADOLESCENTS

Purpose: To study some of the consequences of illness in adolescents on their relationships with their parents, siblings, and peers, and on their school performance.
Subjects: 9,000 high school students from all major regions of the United States and including Negroes, Mexican-Americans, American Indians, and Orientals; students in Mexico, New Zealand, England, and Canada.
Methods: The adolescents are asked to fill out a four-page questionnaire in their classrooms. We have collected data from all students in the high school or a portion of students obtained through a stratified sampling design. The total sample, strictly speaking, is an accidental sample, but has characteristics of a cluster sample. Four Guttman-type scales have been developed measuring paternal and maternal interest and paternal and maternal control over the adolescent.

Findings: A preliminary analysis of 5,000 responses has been made.
Duration: February 1968-December 1970.
Investigator(s): Evan T. Peterson, Ph.D., Professor of Sociology, Brigham Young University, Provo, Utah 84601.
Publications: Paper presented at National Council on Family Relations Meeting, New Orleans, October 1968; publications planned, 1969.

Childrearing

24-MB-1 FEEDING AND TOILET TRAINING PRACTICES IN ATHENS AND SALONIKA

Purpose: To investigate feeding and toilet training practices of urban Greek mothers.
Subjects: 606 mothers of 1,148 children.
Methods: Mothers were individually questioned on their childrearing practices by trained interviewers. Major variables examined were mother's education, child's sex and order of birth. Also studied were mother's age, occupation, and number of years in town.
Findings: With regard to feeding practices, 90 percent of the mothers reported breastfeeding their children; the remaining 10 percent gave physical reasons for not breastfeeding. Mothers with more than an elementary school education tend to breastfeed less (69 percent) than mothers with less education (93 percent). Length of breastfeeding was reported about the same for boys as for girls. Neither sex nor birth order of the child seems to be a differentiating variable.
Duration: January 1966-June 1969.
Investigator(s): Vasso Vassiliou, Ph.D., and Litsa Karatsioli, B.A., Research Assistant, The Athenian Institute of Anthropos, 8, Dem. Soutsou St., Athens 602, Greece. (Reported by Mariella Christea, Assistant to the Director, The Athenian Institute of Anthropos.)
Publications: Technical report planned, to be available from the Institute.

24-MB-2 MOTHER-CHILD INTERACTION STUDY

Purpose: To determine if social class differences exist in mother-child interaction, and to attempt to relate any differences found to early cognitive development.
Subjects: 30 middle class and 30 lower class first-born girls, age 10 months.
Methods: Two home visits are made during which the mother-child interaction is observed. Infants are then brought to Harvard laboratory where various assessments are made, such as ability to differentiate meaningful and nonmeaningful speech, ability to differentiate mother's voice from a stranger's voice, length of attention span, interest in novelty, and degree of child's attachment to mother.
Findings: Two important aspects of mother-child interaction appear to be distinctiveness of stimulation to which mother exposes child at home (talking to child face-to-face without other stimulation), and degree of attachment of child to mother (degree to which mother makes herself available to the child to make responses toward her, such as touching her, looking carefully over her face, vocalizing to her, and following her around).
Duration: September 1967-September 1969.

Investigator(s): Steven R. Tulkin, M.A. (Ph.D. Candidate), Graduate Student, and Jerome Kagan, Ph.D., Professor of Developmental Psychology, Department of Social Relations, Harvard University, Cambridge, Mass. 02138.
Cooperating group(s): National Science Foundation.
Publications: Book or monograph planned.

24-MB-3 CURRENT APPROACHES TO CHILDREARING IN AUSTRIA (AS REFLECTED IN RECOMMENDATIONS OF WORKERS IN BABY CLINICS)

Purpose: To compare Austrian childrearing practices with modern practices in other Western and Eastern countries.
Subjects: A representative sample of pediatricians, social workers, nurses and administrators in well baby clinics, nursery schools, mothercraft courses, etc., in Austria.
Methods: Subjects filled out a questionnaire relating to attitudes regarding feeding, toilet training, discipline, sleep, "habits", sex education, and separation. Data on respondent's education and background were collected.
Duration: May 1968-1969.
Investigator(s): Hans Strotzka, M.D., Dozent, Vienna University Medical School; Gunther Pernhaupt, M.D., Pediatrician, private practice; Maria D. Simon, Ph.D., Research Associate, Institute for Advanced Studies, Stumpergasse 56, A-1060, Vienna, Austria.
Cooperating group(s): Vienna Department of Social Welfare.
Publications: Monograph and handbook on early childhood education planned.

24-MB-4 BATTERED CHILD RESEARCH PROJECT

Purpose: To explore factors which are critically associated with battering of young children, and to develop methods of casework intervention in the family processes which result in such abuse.
Subjects: 45 to 50 families in which an infant under the age of four years is suspected of having received injuries at the hands of his parents or guardians. Families will be referred from one or two London teaching hospitals.
Methods: Team of social worker and caseworkers, in close cooperation with psychiatric, pediatric, and welfare consultants, begins work with the parents as soon as the child is brought to the hospital. Exploratory research is based on clinical interviews, continuing medical and psychosocial assessment, and evaluation of the casework treatment process. Treatment is guided by theoretical assumptions and hypotheses drawn from existing literature, e.g., the knowledge of factors determined by internal characteristics of abusive parents, and family, social, and biological influences.
Duration: 1968-1971.
Investigator(s): Joan Court, M.S.W., Senior Social Worker, Angela Skinner and Raymond Castle, Caseworkers, Carolyn Okell, B.Sc., Research Assistant, and Arthur F. Hughes, Executive Officer, National Society for the Prevention of Cruelty to Children, 1 Ridinghouse St., London W.1, England.
Cooperating group(s): St. Mary's Hospital Medical School, London W.2.
Publications: Monograph or book planned, 1972.

SOCIOECONOMIC AND CULTURAL FACTORS

24-NA-1 THE RELATIONSHIP OF POVERTY TO EDUCATIONAL DEPRIVATION

Purpose: To investigate the relationship between secondary school students' membership in different kinds of poverty groups and various manifestations of educational deprivation.
Subjects: 5,000 students and 500 teachers in 12 junior and senior high schools in the four-county Pittsburgh metropolitan area, including one school with an enrollment of 80 percent poverty-level students; matched control schools in similar communities with similar student body composition.
Methods: Analysis of data from questionnaires administered at beginning and end of school year to all pupils and teachers in experimental schools and to teachers and students of randomly selected grades in control schools.
Duration: 1966-1968.
Investigator(s): Edward A. Suchman, Ph.D., Professor of Sociology, University of Pittsburgh, Pittsburgh, Pa. 15213.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Social Science Quarterly, 253-261, September 1968.

24-NB-1 FROM SCHOOL TO WORK: THE ENTRY OF NEGRO AND WHITE VOCATIONAL HIGH SCHOOL GRADUATES INTO THE LABOR MARKET

Purpose: To contrast the work histories (earnings, rates of unemployment, type of employer, etc.) of graduates of a unit-industry vocational high school in a large metropolitan city, and to account for some of the differences by examining the processes in the school and labor market by which the students are inducted into the labor force.
Subjects: 1,950 Negro, Puerto Rican, and white graduates of the classes of 1956 through 1963 of a unit-industry metropolitan vocational high school.
Methods: Analysis of Social Security Administration work-history data for the 1956-1963 graduates together with collateral school data; informant interviewing of key school and industry personnel.
Findings: Negro and Puerto Rican graduates tend to earn less than white graduates in each of the 13 curricula. Differences in earnings persist when industrial sector of employment is held constant and for the entire followup period as well (up to seven years on the labor market).
Duration: May 1968-April 1969.
Investigator(s): Sally T. Hillsman, Ph.D. Candidate, Research Associate, Bureau of Applied Social Research, Columbia University, New York, N. Y. 10025.
Cooperating group(s): Manpower Administration, U. S. Department of Labor.

24-NB-2 OCCUPATIONAL PERCEPTIONS AND ASPIRATIONS OF ADOLESCENTS

Purpose: A child's conception of the stratification system in the occupational structure comes from his parents and is likely to change only if he has extensive contact with others, usually classmates, whose status levels differ. Present study tests the hypothesis that major changes will occur in the perceptions and aspirations of adolescents following a shift in the socioeconomic composition of their school classes.
Methods: Children are observed prior to and after shift in the socioeconomic composition of their classes through a questionnaire which focuses on process of change and extent to which changes in status perceptions are associated with changes in aspirations. Changes in perceived levels of training and ability required to attain various positions reveal the information about occupations that most affects and is most affected by changes in aspirations and prestige perceptions.
Duration: July 1968–October 1970.
Investigator(s): C. Norman Alexander, Jr., Ph.D., Assistant Professor of Sociology, Stanford University, Stanford, Calif. 94305.
Cooperating group(s): National Science Foundation.
Publications: Monograph and articles planned.

24-NB-3 JOB FAIR FOR STUDENTS, HOUSTON, 1968--AN EVALUATION

Purpose: To report on the planning, development, and implementation of the 1968 Job Fair for economically disadvantaged students; to evaluate the student and employer experiences consequent to participation in the Job Fair.
Subjects: 8,000 students, ages 16 and over, from economically disadvantaged families.
Methods: Demographic data pertinent to Job Fair applicants were collected prior to the Fair. A followup questionnaire was sent out to Job Fair applicants, both hired and not hired, and to Job Fair employers, and a comparison of students hired and not hired according to specified variables was drawn from demographic data and questionnaire returns.
Duration: May 1968-February 1969.
Investigator(s): Morris Kagan, Ph.D., Research Director, and Virginia Kennedy, M.S., Research Associate, Community Welfare Planning Association, 215 Main St., Houston, Tex. 77002.
Cooperating group(s): Office of the Mayor, Houston; Youth Opportunity Center, Texas Employment Commission; Tenneco; Humble Oil Company.
Publications: Report to be published.

24-NB-4 BERKELEY WORKREATION PROGRAM

Purpose: To provide a broad experience for youth combining employment, education, and recreation.
Subjects: Young people from a variety of social, racial, cultural, and scholastic backgrounds.
Methods: Employment procedures, which precede the youth's work experience, include an interview, orientation, and job training and are designed to prepare the young person for the adult world. During the work experience itself, responsible guidance is provided, and the young employee can prove himself and develop positive attitudes toward employment, education, community responsibility, and his own work. A planned, supervised program of adult forms of recreation providing guides for the constructive

use of leisure time is also introduced. The program will be evaluated for possible use by others.
Duration: May 1964-April 1969.
Investigator(s): Paul Williamson, Acting Director, Berkeley Workreation Program, 1706 University Ave., Berkeley, Calif. 94703.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-NC-1 YOUTH AND CIVIC RESPONSIBILITY

Purpose: To determine parent-child congruence on political attitudes and behavior, and which family factors, if any, are associated with cross-generational political agreement.
Subjects: One parent (half mothers and half fathers) and a college-age child in 60 families. Parents were from upper-middle class Chicago suburbs, politically active, and identified with either liberal or conservative political and social causes.
Methods: The parent and college-age child were interviewed separately; interviews were closely parallel for parent and child, covering political and social attitudes, as well as childrearing practices and present family emotional climate. Interview protocols were coded for four measures of family emotional climate, permissiveness, warmth, conflict, and interaction, using both parent and child interviews for each measure. Parent interview protocols were coded for extent of political tutoring of the child, and for "parental dedication to causes" (seeking to right wrongs, etc.). Parent-child congruence in political attitudes was determined for a number of areas such as economic, civil liberties, etc.
Findings: Measures of family emotional atmosphere are not found to be highly associated with parent-child congruence on political attitudes and behavior, while measures of parental politicization are highly associated.
Duration: June 1967-June 1969.
Investigator(s): L. Eugene Thomas, Ph.D., Assistant Professor, University of Connecticut, Storrs, Conn. 06268.
Cooperating group(s): Committee on Human Development, University of Chicago, Chicago, Ill. 60611.
Publications: Several journal articles in preparation.

24-NC-2 SCHOOL CHILDREN'S TRUST IN GOVERNMENT

Purpose: To obtain view of children's trust in government and governmental authority figures as contrasted with their trust in other adults; to observe developmental changes over a two-year period; to relate notions of trust to self-esteem and social status; and to determine expectations of future adult political participation.
Subjects: Public school children of an urban district in grades 4, 6, 8, and 10.
Methods: Oral interview in 1966, and written questionnaire personally administered in 1968.
Duration: Spring 1966-Fall 1969.
Investigator(s): Roberta S. Sigel, Ph.D., Professor of Political Science, Wayne State University, Detroit, Mich. 48202.
Cooperating group(s): Center for Urban Studies, Wayne State University.
Publications: Findings will be published in journals.

24-NC-3 FAMILY COMMUNICATION PATTERNS AND POLITICAL PARTICIPATION

Purpose: To test the hypothesis that each of four family communication types will lead to different types of political behavior. The types developed are: (1) laissez-faire, characterized by a lack of emphasis on either socio- or concept-oriented relations; (2) protective, stressing socio-oriented relations; (3) pluralistic, characterized by a stress on concept-oriented relations; and (4) consensual, stressing both types. The different kinds of political behavior are: (1) overt actions, including voting and campaign activity; (2) cognitions, including information and opinions; and (3) communication, including mass media used and information seeking.
Subjects: 8th and 11th grade children from six cities chosen for political diversity and socioeconomic level; their parents.
Methods: In the spring of 1968 and again during the fall election campaign students were given self-administered questionnaires in which they were asked to respond to a series of items describing family communication practices which vary in the stress placed on harmonious personal relations or on concepts and ideas. Parents were interviewed in person or asked to fill in a similar questionnaire. Data are being combined for analyses of family patterns.
Duration: September 1965-October 1970.
Investigator(s): Jack M. McLeod, Ph.D., Chairman, Mass Communications Research Center, University of Wisconsin, Madison, Wis. 53706.
Cooperating group(s): National Science Foundation.

24-NG-1 EDUCATION AND IDENTITY CONFLICT AMONG CREE INDIAN ADOLESCENTS

Purpose: To determine the relationship between identity conflict and the individual Cree student's socialization experiences in the traditional bush-trading post environment as compared with the urban school milieu.
Subjects: 110 Cree adolescent students of north-central Quebec; control group of 34 adolescents and young adult Cree who have little or no formal education.
Methods: During a two-year period from 1966 to 1968 all Cree adolescents of the Waswanipi and Mistassini bands attending elementary and high school were studied by means of ethnographic field observation at the reserve settlement and in the urban school setting. Relatively standardized data were collected for all students through the construction of the Adolescent Adjustment Interview. This comprises some 100 questions investigating the student's self-image and ego-ideal, as well as the nature and extent of identity conflict resulting from enculturative discontinuity inherent in the separation of Cree children from the traditional hunting-trapping way of life in order to attend schools located hundreds of miles south of the sub-Arctic region inhabited by these Cree Indians. Data are being statistically analyzed.
Duration: July 1966-June 1969.
Investigator(s): Ronald M. Wintrob, M.D., Research Associate, Section of Transcultural Psychiatric Studies, and Peter S. Sindell, Assistant Professor, Department of Sociology and Anthropology, McGill University, Montreal, Quebec, Canada.
Cooperating group(s): ARDA - Department of Forestry and Rural Development, Ottawa; Laidlaw Foundation, Weston, Ont.
Publications: Conflict in Culture, Norman A. Chance (Ed.), Ottawa, Canada: Canadian Centre for Research in Anthropology, in press, 1968.

24-NG-2 CULTURAL ADAPTATION IN A REMSTAL VILLAGE

Purpose: To study the influence of a village educational system in an urbanizing environment; specifically, to investigate the role of the school as a culture-transmitting agency.
Subjects: 290 native and migrant children in grades three through nine, from Remstal, near Stuttgart.
Methods: Children are observed in the schools, and interviews are held with children and parents, school teachers and administrators, and village officials. An adaptation of the Instrumental Activities Inventory (developed by the authors--see Southwestern Journal of Anthropology, Spring 1965), consisting of 30 line drawings of significant activities leading to specific life goals and life styles, was administered with two 35 mm. projectors to all children, and in individual sessions to a sample of 12 children. Children were asked to choose activities in which they would like to engage and to explain their choices. Protocols are being analyzed for specific values, generalized value orientations, and cognitive style.
Findings: To date the most significant finding is that a definite school-induced village-oriented "Heimat" identity prevails throughout responses up to the sixth grade, irrespective of child's origin (urban or rural; local or from outside Remstal).
Duration: January 1968-January 1970.
Investigator(s): George D. Spindler, Ph.D., Professor of Anthropology and Education, and Louise S. Spindler, Ph.D., Lecturer and Research Associate in Anthropology, Stanford University, Stanford, Calif. 94305.
Cooperating group(s): Procter and Gamble.
Publications: Articles to appear in anthropology journals in 1970; book to be published by Holt, Rinehart and Winston, 1971.

24-NG-3 MILIEU-RELATED VARIATIONS OF MOTIVATIONAL PATTERNS OF PREADOLESCENTS IN GREECE AS REVEALED BY STORY SEQUENCE ANALYSIS

Purpose: To investigate aspects of family dynamics in the light of changing patterns of family life in contemporary Greece; specifically, to test hypothesis that the Greek family fosters dependence by studying the development of motivating attitudes throughout adolescence.
Subjects: 30 12-year-old lower-middle class boys and girls attending the same school in Athens; control group of 42 12-year-old boys from the Island of Patmos, where more traditional cultural patterns of family life are still prevalent.
Methods: TAT's were administered individually for three consecutive years, and results of the two groups were compared.
Findings: The technique differentiates between the two groups. Problems characteristic to the island family life emerged. More important for the value of Story Sequence Analysis as a tool for research is that it has provided indications illuminating certain puzzling aspects of the attitudes of Athenian preadolescents and has contributed to the formulation of working hypotheses.
Duration: September 1965-1969.
Investigator(s): Vasso Vassiliou, Ph.D., Harris Katakis, B.A., and George Vassiliou, M.D., The Athenian Institute of Anthropos, 8, Dem. Soutsou St., Athens 602, Greece. (Reported by Mariella Christea, Assistant to the Director, The Athenian Institute of Anthropos.)
Publications: Mimeographed Communication No. 53 available from Miss Litsa Karatsioli, The Athenian Institute of Anthropos.

24-NG-4 EDUCATIONAL STANDARDS FOR CHILDREN OF ELEMENTARY LEVEL ON OFFSHORE REMOTE ISLANDS OF THE RYUKYU ISLANDS

Purpose: To compare the problems of elementary school children residing on offshore remote islands in the Ryukyu Islands with those children living in the more populated central areas on Okinawa proper.
Subjects: Children located on the 42 islands making up the Ryukyuan archipelago with educational institutions.
Methods: Scholarship records are compared, and each island is visited to record the kind of school buildings, equipment, teacher preparation, and background of the islands (agriculture or fishing).
Findings: Currently there are fewer disciplinary problems, more interest in school, and a keen interest in topics which the children can relate to their own world.
Duration: October 1966–October 1969.
Investigator(s): Gordon Warner, Ed.D., Education Advisor, U. S. Staff, Tripartite Advisory Committee to the High Commissioner of the Ryukyu Islands, APO San Francisco, Calif. 96248.
Publications: Shurei No Hikari, November or December 1969.

24-NG-5 PERSONALITY FACTORS IN JAPANESE-AMERICAN ADOLESCENTS

Purpose: To identify some of the psychological factors and understand some of the processes underlying the successful acculturation of Japanese immigrants to the United States; to assess the relation between changes within Japanese family structure and socialization mechanisms, and personality structure.
Subjects: Third generation Japanese-American adolescents; comparison group of adolescents of Caucasian and Hawaiian descent.
Methods: Subjects are measured on factors such as dependency, deference, achievement, and sex role identity; behavioral correlates of personality factors, as well as behavioral differences between descent groups, are investigated by self-report measures of antisocial behavior and alcohol and drug use. Selected subjects are interviewed intensively and given psychological tests in order to identify other personality affinities at a different level of complexity than the above measures assess and to examine differences in selected childrearing and other socialization practices.
Duration: September 1968–August 1969.
Investigator(s): Howard T. Blane, Ph.D., Assistant Clinical Professor of Psychology, Massachusetts General Hospital, Boston, Mass. 02114.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Journal article and/or monograph planned.

EDUCATIONAL FACTORS AND SERVICES

General

24-OB-1 ORIENTATION AND PLACEMENT OF CULTURALLY, ECONOMICALLY, AND EDUCATIONALLY DEPRIVED CHILDREN OF JUNIOR HIGH AGE THROUGH A COMPREHENSIVE READINESS PROGRAM

Purpose: To design a counseling and orientation program to help students who transfer from rural, one-room, ungraded elementary schools to junior high school.
Subjects: 200 eighth grade students and their parents.
Methods: Program includes contacting transfer students five months before enrollment; evaluating needs of the student; counseling students and parents on opportunities, problems, regulations, and other factors important in developing a positive attitude towards education; providing orientation program on school teachers, facilities, procedures, and library services; and conducting followup studies involving the entire faculty. Individual counseling is also available.
Duration: 1966-1969.
Investigator(s): William R. Kreul, M.S., Counselor and Project Director, South Junior High School, St. Cloud, Minn. 56301.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-OB-2 SEARCH (SEARCH FOR EDUCATIONAL ACHIEVEMENT THROUGH REACHING COMMUNITY AND HOME)

Purpose: To develop a family-oriented program to aid children with school adjustment and learning problems.
Subjects: 100 families of students in grades seven to nine from public and private schools.
Methods: Parents and a full-time social worker employed in one of the junior high schools participate in large and/or small group discussions and counseling sessions in evening meetings at the school. People in competent case and group work and community organization act as consultants on possible approaches to working with parents and also investigate social work methods and techniques that may be used to help the family change in the interest of better pupil adjustment and school achievement.
Duration: June 1967-June 1970.
Investigator(s): Roland S. Larson, Ed.D., Coordinator, Pupil Personnel Services, Public Schools, St. Louis Park, Minn. 55426.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-OB-3 COMPUTER-ASSISTED STUDENT COURSE SELECTION PROJECT

Purpose: To provide a dialogue between computer and student concerning the student's plans for his future and for his courses in the coming year;

to study the psychological effects on the student of his interaction with a computer.
Subjects: Ninth grade class in Palo Alto junior high school, and control school; eventually all students in grades 9 to 12.
Methods: Probability data for an individual student together with information about 10th grade courses and a routine for selecting them were made into a computer dialogue via a teletypewriter. Dialogue has two distinct parts, one concerning general data about courses, and college or vocation information, and the second, or module, containing the actual 10th grade course selection program. Students are given the choice of continuing or stopping after each part, and at the end are asked whether they would like to confer with a counselor. Dialogue is evaluated by means of a counselor's rating sheet which classifies questions for content and source, as compared to those from an information booklet, from student, parent, teacher, or administrator. Questions are then compared with those asked at control school. Students also evaluate procedure.
Findings: Seventy-five students in a pilot study gave a favorable response. They especially approved the short format and anonymity and impersonality of the teletypewriter.
Duration: 1965-continuing.
Investigator(s): Murray Tondow, Ph.D., Director, and Mary L. Betts, Ph.D., Systems Analyst, Educational Data Services, Palo Alto Unified School District, Palo Alto, Calif. 94306.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Journal of Educational Data Processing 4:4, Fall 1967.

24-OD-1 SPECIAL EDUCATION FOR PERSONAL ADJUSTMENT--EVALUATION OF LONG-TERM EFFECTS OF A SEX EDUCATION PROGRAM

Purpose: To evaluate the effects of exposure to a comprehensive program of sex education.
Subjects: Students who graduated 15 to 17 years ago from a school offering the program on the primary and secondary levels and who by now presumably have developed stable adult patterns; similar group of students who attended a school comparable in almost all respects except for the lack of a comprehensive sex education program.
Methods: Subjects were interviewed on sexual adjustment, the role sexual learning played in this adjustment, and the ramifications of this adjustment for patterns of social life and mental health; the two groups were then systematically compared.
Duration: February 1966-not reported.
Investigator(s): William Simon, Ph.D., Institute for Juvenile Research, 232 E. Ohio St., Chicago, Ill. 60611; John H. Gagnon, Ph.D., Department of Sociology, State University of New York, Stony Brook, N. Y. 11790; and Eggert Meyer, Research Associate, Institute for Sex Research, Indiana University, Bloomington, Ind. 47401.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-OF-1 THE EFFECTS OF EARLY EDUCATIONAL STIMULATION ON SELECTED BEHAVIORS OF FIRST GRADE CHILDREN

Purpose: To test the hypothesis that no significant mean differences exist between a group of first grade children who are completing a year of structured educational stimulation and a similar group who are completing two years of this sort of stimulation with regard to achievement test scores, measures of intelligence, indices of personal-social adjustment, and average daily attendance.

Subjects: 138 first grade children: 53 in two classes who had experienced one year of structured educational stimulation prior to entrance into first grade, and 85 in three classes, 42 of whom had had one year of private kindergarten experience and 43 who had had no preschool experience.
Methods: The Static Group Comparison (Campbell and Stanley, 1963) provided the research design. Effects of educational stimulation were determined through pretesting of children with the Metropolitan Reading Readiness Test and the California Short Form of Mental Maturity, Form A; results were compared with posttest scores on the Metropolitan Achievement Test, California Short Form of Mental Maturity, Form B, and the Student-Teacher Rating Scale.
Duration: September 1967-May 1968.
Investigator(s): Arthur L. Cox, Ed.D., Assistant Professor of Education, Georgia Southwestern College, Americus 31709; Joseph C. Bledsoe, Ph.D., and Charles E. Johnson, Ed.D., Professors of Education, University of Georgia, Athens, Ga. 30601.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Journal of Research and Development in Education 2:1, Fall 1968.

24-OF-2 FAMILY AND ACHIEVEMENT, A PROPOSAL TO STUDY THE EFFECT OF FAMILY SOCIALIZATION ON ACHIEVEMENT ORIENTATION AND PERFORMANCE AMONG URBAN NEGRO AMERICANS

Purpose: To examine the effects of socioeconomic status, socialization, family structure, and community pressures on the development of achievement motives and values in northern and southern Negro subcultures; to investigate negative motives which prevent students from developing acceptable levels of performance, including self-defeating reaction patterns which aggravate problems of low motivation and aspiration.
Subjects: 3,200 students in eight high schools.
Methods: Survey and experimental methods were used. Questionnaire data were collected from all students and interviews were held with a smaller sample and their parents. Students were randomly assigned to groups which received different instructions and were tested by either a Negro or white administrator.
Duration: 1965-1968.
Investigator(s): Edgar G. Epps, Ph.D., Associate Director, Carver Research Foundation, Tuskegee Institute, Tuskegee, Ala. 36088.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Final report, February 1969; journal articles planned.

24-OF-3 STUDIES OF REINFORCEMENT, THE SOCIOEMOTIONAL CLIMATE OF LEARNING, AND SCHOLASTIC ACHIEVEMENT AND ATTITUDES

Purpose: To investigate factors influencing school success of normal and disadvantaged children.
Subjects: A national random sample of 6,000 high school students; elementary school children from Brockton, Mass. and Chicago, Ill.
Methods: A number of experimental effects have been applied to random subgroups of school children. Concentration is on the role of secondary reinforcement in the form of increased verbal praise, its effect on children and teachers, and its interaction with children's and parents' characteristics. Characteristics of teachers and child guidance workers have also been investigated.

Findings: The systematic use of secondary reinforcement can be used to bring about a more constructive learning environment, especially for children of the urban poor.
Duration: 1961-1970.
Investigator(s): Herbert J. Walberg, Ph.D., Assistant Professor, Harvard University, Cambridge, Mass. 02138.
Cooperating group(s): Ford Foundation; Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: American Journal of Educational Research; Journal of Special Education; other papers planned.

24-OF-4 EFFECT OF PERSONALITY AND ATTITUDE IN PROGRAMMED INSTRUCTION

Purpose: To determine the role played by individual differences in the effectiveness of programmed instruction.
Subjects: High school and college students enrolled in classes which utilize programmed instruction.
Methods: Data were obtained on personality variables, attitudes toward the methods of programmed instruction, and programmed learning criterion variables.
Duration: September 1966-completed.
Investigator(s): Keith G. Davis, Ph.D., Psychologist, Center for Student Life Programs and Studies, University of Colorado, Boulder, Colo. 80302.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-OF-5 A COMPARISON OF ACADEMIC ACHIEVEMENT OF SECONDARY STUDENTS OF THE UNITED STATES AND BRITISH ISLES

Purpose: To test the hypotheses that (1) significant differences exist between the mean achievement of American and British students of high, average, and low ability attending private and public secondary schools, in the areas of arithmetic, reading, English usage, and science; (2) specific periods can be identified during which respective students' mean achievement across ability levels for the respective countries becomes significantly different in these areas; and (3) specific factors influencing pupil achievement can be identified and the significance of individual factors assessed; also, to determine the significance of differences in academic progress through mean achievement for a sample of students who had been involved in a similar study comparing the academic achievement of elementary-age pupils. (See Research Relating to Children, Bull. No. 17-O-4.)
Subjects: Random sample of American and British students enrolled in public and private secondary schools.
Methods: Academic achievement data obtained and analyzed statistically.
Duration: July 1966-August 1969.
Investigator(s): Robert L. Gibson, Ed.D., Professor of Education, Indiana University, Bloomington, Ind. 47401.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-OG-1 EDUCATIONAL AND BEHAVIORAL SEQUELAE OF PRENATAL AND PERINATAL CONDITIONS

Purpose: To investigate relationships of conditions of pregnancy, birth, and infancy with exceptional school behavior and achievement.
Subjects: 1,750 children in kindergarten, first, and fourth grades.

Methods: Instruments and procedures are established for use by the 12 participating hospitals. Subjects are evaluated over a three-year period through individual testing of language development and school skills; school behavior is assessed through interviews with teachers. Multiple contrast groups are used for comparisons of specific conditions being studied; measuring instruments such as Illinois Test of Psycholinguistic Abilities, Metropolitan Readiness Tests, Stanford Achievement Tests, and Behavior Rating Schedule are used at the different grade levels. Evaluation methods include tests of means and variances, regression analysis, and comparisons.
Duration: April 1966-continuing.
Investigator(s): Bruce E. Balow, Ph.D., Professor of Special Education, University of Minnesota, Minneapolis, Minn. 55455.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: To be submitted to educational and psychological journals; monograph planned.

24-OG-2 TEACHERS' EXPECTATIONS: THEIR EFFECT UPON SOCIAL POSITION

Purpose: To study the effect of teacher expectations upon change of social acceptance of students by their peers.
Subjects: 450 elementary school children.
Methods: A 20 percent stratified random sample in each class has been identified to the teachers as showing emerging social skills sufficient to raise level of social acceptance. Change in social status, as measured before and after identification, will be analyzed.
Duration: September 1968-March 1969.
Investigator(s): John F. Jacobs, M.Ed., Research Associate, and Wayne C. Richard, Ph.D., Assistant Professor, Department of Special Education, University of Florida, Gainesville, Fla. 32601.
Cooperating group(s): Florida Educational Research and Development Council.
Publications: Publication of final report is planned.

24-OG-3 SOCIAL APPROVAL AND ACHIEVEMENT STRIVING IN THE KINDERGARTEN

Purpose: To study effects of teacher approval of achievement efforts on subsequent achievement striving, and to relate this to internal-external reinforcement control.
Subjects: 45 male kindergarten children.
Methods: Direct behavior observation in the classroom. Child-teacher interaction and child achievement striving behavior according to the Crandall method.
Findings: Changes in teacher's approval over disapproval ratios for achievement efforts related positively to changes in achievement striving in boys who had acquired a feeling of internal reinforcement control.
Duration: September 1967-September 1968.
Investigator(s): Gunars Reimanis, Ph.D., Chairman, Division of Social Sciences, Corning Community College, Corning, N. Y. 14830.
Cooperating group(s): Stanford University School of Education; National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Submitted to Child Development, 1968; Technical Report: Research Memorandum No. 35, Stanford University Center for Research and Development in Teaching, Palo Alto, Calif. 94305.

24-OG-4 HOME AND SCHOOL FACTORS IN PUPIL MENTAL HEALTH

Purpose: To study the relations between (1) selected demographic factors and a number of aspects of pupil growth in school, and (2) a number of aspects of teacher-pupil classroom interaction and pupil self-regard.
Subjects: All pupils in grades three to six in three elementary schools in central South Carolina.
Methods: Teacher reports of such home influences as a broken home, recent death in immediate family, serious illness, chronic illness of the child, and others, are used to identify children with atypical home settings. These pupils are then compared with "normals" on a variety of measures of subject matter, personality, creativity growth, and attitudes. Classroom behavior, as recorded by two objective schedules, will be related to a measure of pupil self-regard.
Duration: March 1968-February 1969.
Investigator(s): Robert S. Soar, Ph.D., Professor, Institute for Development of Human Resources, University of Florida College of Education, Gainesville, Fla. 32601.
Publications: Journal articles planned.

24-OG-5 THE STRESS OF SCHOOL

Purpose: To find specific ways for the classroom teacher to become more competent as an investigator of children's individual differences and an intervener in development so that she and the school can become more successful in educating more children, including those with learning and behavior problems; specifically, to attempt to program the nature and degrees of freedom of schools and children to cope with the stress of normal and idiosyncratic child development, to evaluate optimal interventions for children in schools, and to provide a procedure by which information gained in one year in a child's school life can be translated to the next.
Methods: Stresses operating on children in the school setting which reduce their freedom of development will be examined and this information will be used to suggest interventions in the classroom which will promote development and serve as stress reducers or isolators. The freedom of the teacher and the school to provide the needed intervention will be studied and an information retrieval system developed which will result in the creation of lexicons of pupil stresses and teacher and school intervention strategies.
Duration: April 1968-March 1972.
Investigator(s): Nadine M. Lambert, Ph.D., Assistant Professor of Education, University of California, Berkeley, Calif. 94720.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: General progress reports and individual papers planned.

24-OG-6 IMIPRAMINE TREATMENT OF SCHOOL PHOBIA

Purpose: To assess the clinical value of imipramine as an adjunct to psychosocial treatment of school phobia.
Subjects: 60 school phobic children.
Methods: Double-blind flexible dosage placebo-controlled study. Central validity criterion is school attendance. Behavioral ratings are made at baseline, three, and six weeks by a child psychiatrist, social worker, and school counselor as well as by parents and patient.

Findings: Pilot study has demonstrated positive results.
Duration: September 1968-August 1969.
Investigator(s): Donald F. Klein, M.D., Director of Research, Hillside Hospital, Glen Oaks 11004; and Charles J. Rabiner, M.D., Chief, Child Psychiatry, Queens Hospital Center, Queens, N. Y.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Imipramine Treatment of School Phobia, C. J. Rabiner, D. F. Klein, et al.

24-OH-1 THE SECONDARY SCHOOL SYSTEM IN THE NETHERLANDS--SOME SOCIAL CONSEQUENCES OF STREAMING

Purpose: To determine the consequences on student attitudes and aspirations of "streaming", a rigid ability selection and sorting system whereby students are divided, at age 11, into distinct educational groups. These correspond to different educational levels and lead to a particular place in the occupational hierarchy, and inadvertently, to a social status position.
Subjects: 14- and 15-year-old male students in Dutch schools; their teachers.
Methods: Questionnaire administered to children and teachers; resulting data analyzed with special attention to those students who appear likely to experience a discrepancy between social class background and future social class standing as indicated by their current type of schooling.
Duration: January 1967-not reported.
Investigator(s): Joseph L. Lennards, M.A., Assistant Professor of Sociology, University of Toronto, Toronto, Ontario, Canada.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-OI-1 AN EXPERIMENTAL PROGRAM TO COMPARE EDUCATION VERSUS TRAINING FOR YOUNG SCHOOL DROPOUTS

Purpose: To compare the effectiveness of formal education leading to a school diploma with that of vocational training in a specific occupation for high school dropouts.
Subjects: Youths who have completed the ninth grade--50 in each of two experimental and two control groups.
Methods: One experimental group took courses leading to a high school diploma while the other received a 52-week training program for entry into specific occupations. The two control groups received guidance and counseling over the one-year period without any education or training. At annual intervals during the following three years a longitudinal study based on economic and psychological measures was conducted. Evaluation of the two programs was based on comparative results between the two experimental groups and comparisons with the control groups.
Duration: Completed.
Investigator(s): Jacob J. Kaufman, Ph.D., Director, Institute for Research on Human Resources, Pennsylvania State University, University Park, Pa. 16802.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: The School Environment and Programs for Dropouts.

24-OK-1 THE EDUCATION OF INTEGRATED INDIAN PUPILS

Purpose: To investigate the influence of school integration on young Indian children; specifically, to appraise curricula with a view to the needs of Indian youth, to improve teachers' understanding of Indian students, to identify curriculum areas needing emphasis for preparing these children to integrate with the non-Indian population for economic and vocational success in adult life, and to aid educators and others concerned with cultural advancement of other minority groups.
Subjects: Indian children from Arikara, Chippewa, and Sioux reservations in North and South Dakota: one group who attended schools with predominantly non-Indian enrollment in grades one to eight and another group who attended schools with a predominantly Indian enrollment during this time; non-Indians who attended schools with largely non-Indian enrollment in grades one to eight.
Methods: Groups were compared on achievement, intelligence, alienation, vocational aspiration, and social relationships. Cultural variables were isolated and compared between groups, and background data were established for each Indian student to provide a basis for future systematic, longitudinal studies.
Duration: September 1967-June 1968.
Investigator(s): Harold J. Miller, Ed.D., Vice President, Mary College, Bismarck, N. D. 58501.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-OK-2 COOPERATION, AGGRESSION, AND LEARNING IN A BIRACIAL CLASSROOM

Purpose: To develop classroom procedures aimed at socializing Negro and white students to engage in cooperative activities as opposed to segregative or aggressive activities.
Subjects: 10 Negro and 10 white students in a newly integrated elementary school, selected on the basis of their high interracial segregation, aggression, and deviance.
Methods: Children received special instruction in academic and social skills throughout a semester of instruction divided into four periods. During the first period, students were observed to obtain baseline measurements of interracial cooperation, segregation, and aggression. In the second period, cooperation behavior was reinforced by tokens which could be exchanged for student's choice of goods and privileges while segregative and aggressive behavior was usually ignored. During the third period, tokens were given to individuals on a noncontingent basis, and in the final period, procedures used in period two were reinstated, followed by an attempt to fade out the token system without decreasing the biracial cooperation. Effect of procedures on behavior outside the classroom was then examined.
Duration: September 1967-October 1968.
Investigator(s): Desmond P. Ellis, Ph.D., Assistant Professor of Sociology, University of North Carolina, Chapel Hill, N. C. 27514.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-OK-3 FACTORS IN SCHOOL INTEGRATION DECISIONS OF NEGRO MOTHERS

Purpose: To attempt to show why relatively few southern Negro mothers are enrolling their children in desegregated schools and seem to prefer local, formerly all-Negro schools instead; specifically, to examine the influence on their decision of four sets of factors relating to social

approval for and potential vicarious gains from sending one's child to an integrated school, personal values and goals, and material conditions in the home and in the local educational system.
Subjects: Random sample of 200 mothers of elementary school children in the South who have chosen either integration or segregation for their children.
Methods: Empirical measures of the variable factors were obtained through interviews with mothers conducted by trained Negro females. Measures obtained on the different factors were related to the decision to integrate or segregate, and a determination was made of the amount of variation found in the effect of each variable factor on the decision made. Subject-related factors controlled were age, education, social class, religion, time spent outside the South, type and amount of contact with whites, sex of child, and distance from school.
Duration: September 1967-September 1968.
Investigator(s): Murray Binderman, Ph.D. Candidate, Instructor, Department of Sociology, University of Miami, Coral Gables, Fla. 33124,
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

Specific Skills

24-PA-1 A PRELIMINARY STUDY OF THE ABILITY OF FIRST GRADE CHILDREN TO ANALYZE GEOMETRIC FIGURES

Purpose: To determine the operational level of first grade children in solving problems which require the partitioning of geometric figures; to determine whether there is a difference in the ability of first grade children to partition discrete point sets as contrasted with their ability to partition connected sets; to gather descriptive evidence for or against the proposition that first-graders will apply strategies to these problems; to determine possible sex differences in these areas.
Subjects: 50 girls and 50 boys chosen at random from first grade classes.
Methods: Each child is interviewed individually and asked to solve geometric problems involving the partitioning of point sets, each of which has different mathematical properties. Problems are designed so that open-ended questions can be employed while keeping the interview structure uniform.
Duration: Not reported.
Investigator(s): G. Edith Robinson, Ph.D., Assistant Professor of Mathematics, University of Georgia, Athens, Ga. 30601.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-PB-1 THE EFFECTS OF KINDERGARTEN INSTRUCTION IN ALPHABET AND NUMBERS ON FIRST GRADE READING

Purpose: To test the hypothesis that teaching children to read letters and numbers in kindergarten will result in an increment in reading level at the end of first grade. This is based on earlier research which demonstrated that the ability to recognize letters and numbers in kindergarten is a better predictor of reading skills at the end of the first grade than are I.Q. or "readiness skills".
Subjects: Two experimental classes of kindergarten children and two control classes.

Methods: In an earlier study experimental classes were given eight weeks of training in alphabet and number games while control classes participated in regular informal kindergarten program. Present project involved a followup of experimental and control groups at end of first grade to measure effects of special training on reading skills. Statistical analyses were designed to measure differential impact of experimental procedure for boys and girls on scores of reading readiness tests administered in kindergarten and to improve efficiency of prediction of reading scores at end of first grade from variables measured in kindergarten.
Findings: Preliminary analysis at beginning of first grade indicated experimental group responded to special training and showed higher level of recognition of numbers and letters than did the control group.
Duration: April-September 1968.
Investigator(s): Norman E. Silberberg, Ph.D., Assistant Director for Clinical Research, and Iver A. Iverson, M.A., Director of Statistical Services, Kenny Rehabilitation Institute, 1800 Chicago Ave., Minneapolis, Minn. 55404.
Cooperating group(s): U. S. Office of Economic Opportunity.
Publications: Two articles in preparation.

24-PB-2 EFFECT OF A KINDERGARTEN PROGRAM OF PERCEPTUAL TRAINING UPON THE LATER DEVELOPMENT OF READING SKILLS

Purpose: To conduct a perceptual training program for kindergarten students in order to determine how the kindergarten experience can be made more meaningful for the later development of reading skills and whether a program of this sort will increase the likelihood that the child will succeed in learning to read.
Subjects: One experimental and one control kindergarten class in each of two schools chosen for their large student population, physical proximity, and the spread of socioeconomic levels in the area; children assigned to classes on the basis of prekindergarten screening.
Methods: Experimental classes receive systematic training for perceptual development, including exercises in visual perception, size constancy, direction, and figure-ground relationships, and training in auditory, tactile, and perceptual discrimination and integration. Control classes receive standard kindergarten experience. Standard test is used at end of kindergarten year to assess differences in readiness for reading. Further comparisons are available at end of first grade from results of Form W of the Stanford Reading Achievement Test.
Duration: September 1968-September 1969.
Investigator(s): Irving Roy, Ph.D., and Muriel L. Roy, 2922 Pacific Ave., Stockton, Calif. 95204.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Report in preparation.

24-PB-3 THE SELF-ESTEEM AND GOALS OF INDIGENT NEGRO CHILDREN

Purpose: To determine to what extent viable programs using members of the community can be developed to increase the self-esteem, goals, and related behavior of Negro children living in a ghetto; to determine the effects of such programs.
Subjects: Negro school children in grade five living in a Negro ghetto.
Methods: Negroes from the ghetto community or a similar background are

carrying out three interrelated programs: instruction in Negro history and culture; modified compensatory education consisting of interaction with Negro "work models" on the job; and interest activity groups consisting of a program of continuing interaction with a variety of "life models" who are productive members of the community.
Duration: January 1968-June 1971.
Investigator(s): Sanford Golin, Ph.D., Associate Professor and Director of Clinical Training, Department of Psychology, University of Pittsburgh, Pittsburgh, Pa. 15213.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Reports in preparation.

24-PB-4 AN EVALUATION OF PROGRAMMED INSTRUCTION IN EARLY CHILDHOOD

Purpose: To evaluate the use of the Edison Responsive Environment in teaching initial reading skills.
Subjects: Three- and four-year-old children of varied socioeconomic levels, divided into experimental and control groups.
Methods: Children in experimental group had daily sessions with the ERE, while control group experienced "regular" preschool curriculum. Groups were compared at the end of one school year, and t test was used to measure efficiency and effectiveness.
Findings: No significant differences existed between the two groups.
Duration: September 1967-September 1968.
Investigator(s): Marciene Mattleman, Ed.D., Assistant Professor, and Donald Hammill, Ed.D., Associate Professor, Temple University College of Education; Doreen Steg, Ph.D., Associate Professor, Drexel Institute of Technology, Philadelphia, Pa. 19104.

24-PB-5 A STUDY OF THE EFFICIENCY OF AUDITORY DISCRIMINATION TASKS AND VISUAL DISCRIMINATION TASKS IN THE READING PROCESS

Purpose: To determine the relationship of variables to reading achievement over the first four grades, and to ascertain whether the factors correlate in the same degree for the boys as for the girls at each grade level.
Subjects: 285 boys and girls who represent the entire population of the first four grades in the same school.
Methods: Subjects were tested individually on an auditory discrimination measure and a visual discrimination measure. Results of these measures were correlated with standardized reading test scores. Correlations for the boys and for the girls on each grade level were inspected for differences.
Duration: September 1968-April 1969.
Investigator(s): Roberta J. Toma, Ph.D. Candidate, Fordham University, Lincoln Center Campus, New York, N. Y. 10023.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Plan to publish.

24-PB-6 TEACHER-PUPIL INTERACTION IN LANGUAGE LEARNING

Purpose: To establish the pattern of attitudes toward the learning of Welsh and English in Wales; to determine whether there is any significant correlation between attitude toward and attainment in Welsh and English.

Subjects: 25 percent of children in Wales, ages 10, 12, and 14.
Methods: Thurstone, Likert, and Osgood Semantic Differential Scales; questionnaires to determine language teaching provision, including training and attitude of teachers, content and method analyses; and especially formulated attainment tests in Welsh and English.
Duration: October 1967-April 1971.
Investigator(s): D. W. H. Sharp, M.A., Director and Lecturer, B. Thomas, M.A., Assistant Director, E. Price, B.A., and G. Francis, B.A., Research Officers, Department of Education, University College of Swansea, Swansea, Glam., Wales.
Cooperating group(s): Schools Council for England and Wales (Research and Development Project); Department of Education, University of Wales.
Publications: Report to be published by Schools Council in 1971.

24-PB-7 THE PROCESS OF LEARNING TO READ--THEORY AND EXPERIMENTS

Purpose: To investigate some aspects of a theoretical model of the development of reading ability.
Subjects: Grade school, high school, and college students.
Methods: Grade school children are followed through several stages of skill formation; psychophysiological recordings, including EMG, breathing patterns, and eye movement patterns, are obtained and correlated with speed and comprehension of material.
Duration: June 1966-May 1969.
Investigator(s): Curtis D. Hardyck, Ph.D., Associate Professor of Educational Psychology, University of California, Berkeley 94720; and Lewis F. Petrinovich, Ph.D., Professor of Psychology, University of California, Riverside, Calif. 92502.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-PB-8 MULTIVARIABLE COMPARISON OF STRUCTURAL READING PROGRAM AND ENRICHED BASAL READING PROGRAM WITH DISADVANTAGED URBAN CHILDREN

Purpose: To test the effectiveness of the Stern and Gould Structural Reading Program as compared to a basic reading program using the Winston basal readers; specifically, to identify the kinds of children for whom each program is more suitable and to explore certain articulation, psycholinguistic, cognitive, and motivational variables which arise as auxiliaries in the learning of reading and writing.
Subjects: Two matched first grade classes of disadvantaged urban school children.
Methods: One class was taught through the Stern and Gould Program while the other used the Winston basal readers. Multivariable comparison was based on standardized tests, informal evaluations, projective measures, and supplementary materials.
Duration: June 1966-September 1968.
Investigator(s): Adella C. Youtz, Ph.D., Professor of Psychology, Newark State College, Union, N. J. 07083.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Publication of followup data planned for 1970.

24-PC-1 **THE EFFECT OF TELEVISION PRESENTATIONS AND CLASSROOM TEACHER CONDUCT INQUIRY SESSIONS ON THE ACHIEVEMENT AND INTEREST IN SCIENCE OF FIFTH GRADERS**

Purpose: To explore new possibilities for the improvement of teaching elementary science; to study ways to effectively integrate television into a school's instructional program; specifically, to design and implement an integrated television and teacher-directed approach to elementary science education, and to determine what combination of the two approaches is most effective.
Subjects: Fifth grade classes in a suburban Cleveland public school system.
Methods: Each television lesson was prepared in two versions--one with an explanation segment and the other with a questioning segment. Following television presentation of a geology lesson based on an elementary school science textbook, classroom teachers conducted "inquiry sessions" in half the classes and discussions in the other half. Students were pretested and posttested after having taken part in one of the four instructional programs.
Duration: June 1967-September 1968.
Investigator(s): Ray Skinner, Jr., Ph.D., Assistant Professor of Secondary Education, Ohio University, Athens, Ohio 45701.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: AV Communication Review 16:3:287-293, Fall 1968.

Special Education

24-QB-1 **EFFECTS OF EXPLORATORY BEHAVIOR ON MOTIVATION AND LEARNING IN A CLASS OF EDUCATIONALLY HANDICAPPED HIGH SCHOOL STUDENTS**

Purpose: To test and evaluate the use of students' exploratory drive as a motive force for learning in a specific area (psychology of learning), in general school learning, and in personal adjustment in the school learning situation; specifically, to test the hypothesis that subjects who become actively involved in learning by exploration, experimentation, and discovery will begin to behave more positively in other areas of learning, will increase in self-esteem, and will develop more adequate personal plans.
Subjects: 29 high school students, ages 15 to 18, in grades 10 through 12 in the California program for the educationally handicapped. Most are of average or above-average ability, but their school performance is characterized by low achievement.
Methods: Pre- and postexperimental evaluations include Q-sort type measures of self-esteem (real-ideal), standardized counseling interview (motivation, attitudes, plans), and testing on principles of learning. Comparisons will be made with baseline on teachers' evaluations, use of equipmental and reading materials, etc. Subjects will be provided with reading materials on psychology of learning, experimental techniques, care of laboratory animals, and any requested materials; laboratory animals (rats), cages, food and equipment for animals; operant conditioning laboratory unit; and materials and guidance for conducting learning experiments.
Duration: November 1968-February 1970.
Investigator(s): Walter S. Lee, Ed.D., Psychologist, Karen Emmons, Teacher, Educationally Handicapped Program, and Verle Sorgen, Counselor, Tamalpais Union High School District, Larkspur, Calif. 94939.
Publications: Article to be submitted to an appropriate professional journal during 1970.

24-QB-2 A SUPPORTIVE PLAY GROUP PROGRAM FOR SECOND GRADERS

Purpose: To determine if the use of educationally oriented group activities in after school recreational settings results in educational gain for underachieving students.
Subjects: 160 underachieving second grade children from eight public schools.
Methods: Students were randomly divided into groups of 10 each. Four groups participated in educationally oriented activities, four participated in these activities and received tutoring, four received tutoring only, and four received no treatment. Effects of program were determined through pre- and posttesting with the Metropolitan Achievement Battery, Primary I; additional data were gathered through school records, participant observers, field notes, and staff workers' evaluations. Program is being repeated with a comparable group of second graders.
Duration: September 1967-September 1969.
Investigator(s): Harold H. Weissman, D.S.W., Assistant Executive Director, Mobilization for Youth, Inc., 214 E. 2nd St., New York, N. Y. 10009.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

24-QB-3 PROJECT FOCUS

Purpose: To identify elementary school children who need additional attention, and to seek effective ways to help them as soon as possible.
Subjects: Children in prekindergarten through grade five in four Montgomery County, Md. elementary schools.
Methods: Children needing additional attention are identified. A team of specially trained teachers works full time with the children and their regular classroom teachers, and specialists and consultants such as speech therapists and medical advisers are available when needed. Children remain a part of their regular classroom while receiving additional help.
Duration: Reported 1968.
Investigator(s): Samuel M. Goodman, Ph.D., Director of Research, Montgomery County Public Schools, 850 N. Washington St., Rockville, Md. 20850.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-QD-1 EVALUATION OF SELECTED ASPECTS OF PROJECT 750 (MASSACHUSETTS PROGRAM FOR EDUCATION AND TREATMENT OF EMOTIONALLY DISTURBED SCHOOL AGE CHILDREN

Purpose: To determine the extent to which the residential and day programs of Project 750 are achieving their educational and therapeutic goals; to ascertain the stability of the children's gains; to make recommendations based on collected data; to demonstrate the value and feasibility of built-in evaluation of special education programs.
Subjects: 115 cases randomly drawn from the population of cases admitted to residential and day programs between August 31, 1963 and May 30, 1968; 40 children still in placement, randomly selected from admissions between 1965 and 1968.
Methods: The basic approach consists of gathering interviews and abstracts of records related to all the subjects in the sample. A focused interview is conducted with at least one parent of each child, and the parent is requested to complete a behavior checklist describing his child's current behavior. Focused interviews are also conducted with

a random sample of clinical administrators of the private schools approved for the "750" program. Public school administrators are interviewed with regard to the operation of the "750" program. Existing official records are abstracted, focusing primarily on measures of educational achievement and intellectual growth.
Duration: July 1968-June 1969.
Investigator(s): Herbert J. Hoffman, Ph.D., Assistant Professor in Research, Florence Heller Graduate School for Advanced Studies in Social Welfare, Brandeis University, Waltham, Mass. 02154.
Cooperating group(s): Massachusetts Advisory Council on Education; Massachusetts Department of Mental Health; Massachusetts Department of Education.
Publications: Report to be available from Massachusetts Advisory Council on Education.

24-QD-2 GROUP METHODS WITH AUTISTIC CHILDREN IN A PUBLIC SCHOOL FRAMEWORK

Purpose: To determine whether and to what extent children with moderate to severe autistic tendencies can gain basic behaviors such as eye contact, communicative speech, skill in following directions, and interpersonal social skills.
Subjects: Random sample of 10 autistic children, ages three to eight, applying for special class, from Los Angeles and Orange Counties, California.
Methods: Each autistic child is paired for periods of 15 to 20 minutes at a time throughout the five-hour school day with another child of similar age who is capable of communicative skills and direction following. The leader child follows directions himself and attempts to physically put the autistic child through the same motions (e.g., pointing to objects, placing the hands or feet in certain positions, etc.). In intermittent 10-minute periods with one adult, two children are led through direction following by the adult, with object reinforcement. During daily half-hour periods, all children, with a ratio of one adult to two or three children, change clothes and participate in sensory stimulation such as rolling on the grass and on other surfaces with a high texture value. Other activities include rhythmic sharing, high level attention holders, sustained work on pencil grasp and control, and gross motor movements on cue.
Duration: September 1968-September 1969.
Investigator(s): Alice C. Thompson, Ph.D., Director, Learning and Behavior Project, and Associate Professor of Psychology, and Margaret Scheffiin, Ph.D., Assistant Professor of Special Education, California State College, Los Angeles, Calif. 90032.
Cooperating group(s): Neuropsychiatric Institute, University of California, Los Angeles.
Publications: Continuing progress reports to appear in *Learning and Behavior Bulletin*, California State College; ultimate summary publication.

24-QE-1 PROJECT KNOW HOW

Purpose: To normalize, through an array of environmental stimuli, the cognitive development of culturally disadvantaged children, and to stabilize participating families by reinforcing the members in their normal familial roles.
Subjects: 30 low income Negro and white families with one-year-old children, in which the father is no older than 35, living in and around Tallahassee, Fla.

Methods: Whole-family experimental intervention includes programs for children and parents. Children spend five mornings a week in an intellectually stimulating nursery school with high adult-to-child ratio. Verbal and other skills helpful in the middle class educational milieu are emphasized. Mothers are instructed in improving homemaking skills and attitudes toward their role as homemaker, and are employed in the nursery. Fathers receive limited job training and therapeutic reinforcement of the breadwinner role. A research and evaluation program accompanies the intervention.
Duration: April 1967-March 1975.
Investigator(s): Richard M. Dunham, Ph.D., Associate Professor, Institute of Human Development, Florida State University, Tallahassee, Fla. 32303.
Cooperating group(s): U. S. Office of Economic Opportunity.
Publications: Data available in mid-1969.

24-QE-2 DESIGNING, INITIATING, AND ADMINISTERING A PROGRAM OF CONTINUOUS EDUCATIONAL STIMULATION

Purpose: To describe the organization, initiation, and administration of a preprimary unit field-tested during the 1966-1967 school year; to evaluate the first year of instruction of a preprimary sample in this organization; to obtain data which could be used effectively in evaluating this organization and in designing an improved administrative organization which would effectively facilitate continuous educational stimulation.
Subjects: 33 five-year-old preprimary children selected as representative of the county-at-large with regard to socioeconomic status, ethnic classification, and I.Q.; 33 six-year-old children attending first grade in the same school; teachers and teacher aides.
Methods: The preprimary children attended school two and one-half hours daily four days a week and were taught by teams of three--teacher, assistant teacher, and teacher aide. They received individual reading instruction approximately 10 minutes each day. First grade students attended school five hours daily, were taught by a teacher and teacher aide, and received reading instruction for one hour each day in small and large groups. Evaluations included pre- and posttest comparisons of M.A., I.Q., and reading readiness scores of the preprimary sample and comparisons of reading achievement scores of both groups.
Findings: Preprimary sample showed mean gains significant at the .01 level in I.Q., M.A., and reading readiness raw scores.
Duration: September 1966-June 1976.
Investigator(s): Lacy D. Powell, Ed.D., Director of Research and Development, Clayton County Schools, 120 Smith St., Jonesboro, Ga. 30236.
Cooperating group(s): Research and Development Center in Educational Stimulation, University of Georgia, Athens 30601; State Department of Education, Atlanta, Ga.; Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Results now available from Dr. Powell, eventually from the Center.

24-QE-3 EVALUATION OF PROJECT OPEN FUTURE

Purpose: To evaluate the success of a seven-year program for preparing able Negro and Mexican-American seventh grade students for eventual admission into highly selective colleges and universities; specifically, to evaluate academic growth of participants, psychological change, vicarious impact on families and friendship groups, and effect on sponsoring institutions.

Subjects: Present sample: about 400 students in grades 8 to 12; eventual sample, including control group: about 1,500.
Methods: Standardized personality and achievement batteries, observation, interviews, and questionnaires. Panel study over five years for each cohort, culminating in successful completion of first year of college.
Duration: May 1968-September 1976.
Investigator(s): Robert T. Stout, Ph.D., Assistant Professor, Rodney Muth, M.A., and Dennis Spuck, M.A., Claremont Graduate School and University Center, Claremont, Calif. 91711.

24-QE-4 INTELLECTUAL STIMULATION OF CULTURALLY DEPRIVED INFANTS

Purpose: To conduct a followup of an earlier study which attempted to raise the level of intellectual functioning of lower socioeconomic class urban Negro children through a program of preschool tutoring (see *Research Relating to Children*, Bull. No. 21-QE-3); to evaluate the effects of this preschool education upon a variety of mental abilities and language skills; to determine the relationship of family variables, mental test scores, and child behavior variables that were collected during the second and third years of life to the child's future intellectual status and adjustment.
Subjects: 30 Negro infants of lower socioeconomic status; control group of 32 infants, selected using criteria of family income, occupation, and education.
Methods: Home education and nursery school education programs.
Findings: At the beginning of the experiment, control group infants had a mean Bayley I.Q. of 108.2 as against 105.1 in the experimental group. However, at the end of the tutoring period, when the infants were 36 months old, the mean I.Q. for the experimental group was 105.9, while that for the control group had dropped to 89.3.
Duration: September 1968-August 1971.
Investigator(s): Paul H. Furfey, Ph.D., and Thomas J. Harte, Ph.D., Codirectors, Bureau of Social Research, Catholic University of America, Washington, D. C. 20017.
Cooperating group(s): United Planning Organization; D. C. Public Schools and Well Baby Clinics; Howard University; The Washington Montessori Institute; National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Psychological, sociological, and educational reports planned.

24-QE-5 FOLLOW THROUGH

Purpose: To provide a five-year supplementary program for children in 10 cities who took part in a Head Start program.
Subjects: 1,000 kindergarten children, poor and nonpoor; comparison group of 700 kindergarten children.
Methods: Children in Follow Through program are divided into four groups: poor Head Start, nonpoor Head Start, poor non-Head Start, and nonpoor non-Head Start. Half of each group is pretested at the beginning of each year, with a posttest following immediately, and the other half is posttested at the end of each year. Children in the comparison group are similarly tested.
Findings: Significant changes in test scores (.01) from pretest to immediate posttest indicate initial testing had an effect on those observed.

Duration: September 1968-June 1973.
Investigator(s): Glen Nimnicht, Ed.D., Project Director, Follow Through, Far West Laboratory for Educational Research and Development, Berkeley, Calif. 94704. (Reported by Ann Fitzgibbon, Project Assistant, Far West Laboratory.)
Cooperating group(s): Cities of Berkeley, Buffalo, Cleveland, Duluth, Fresno, Lebanon (N.H.), Goldsboro (N.C.), St. Louis, Salt Lake City, and Sumter (S.C.).

24-QE-6 EVALUATION OF APPALACHIA EDUCATIONAL LABORATORY EARLY CHILDHOOD EDUCATION PROGRAM

Purpose: To assess the combined use of television, paraprofessionals, and mobile facilities as an alternative approach to early childhood education.
Subjects: 96 boys and girls, ages three to five.
Methods: Program effort--case study; program performance--experimental design--ITPA, Frostig, PPVT, and curriculum specific measures; cost analysis.
Duration: September 1968-September 1969.
Investigator(s): James T. Ranson, Ph.D., Director of Research, Robert Childers, Ph.D., Senior Development Specialist, and Roy Alford, M.A. (Ed.D. Candidate), Coordinator of Early Childhood Education, Appalachia Educational Laboratory, P.O. Box 1348, Charleston, W. Va. 25325.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Monograph planned, 1970.

24-QE-7 A PROBLEM OF THE LONG-RANGE EFFECTS OF A PROGRAM OF CURRICULAR AND ADMINISTRATIVE INNOVATIONS ON ACHIEVEMENT AND ATTITUDE OF DISADVANTAGED STUDENTS

Purpose: To determine long-range effects of a highly concentrated short-term program of curricular and administrative innovations on achievement and attitude of disadvantaged elementary school students.
Subjects: Subsample of 80 of group of 200 students from four economically deprived areas of Houston studied in earlier phases of project. (See Research Relating to Children, Bull. No. 22-QE-3.)
Methods: Followup data were collected for 80 of the original 200 children who took part in a highly concentrated 20-day special institute program in the summer of 1967. Data included school records, attitude scores from a semantic distance scale, standardized achievement test scores in mathematics and language arts, and information from home interviews, and were analyzed through a multiple classification analysis of variance.
Findings: Parents considered the summer program beneficial in terms of improved school work and social relations. Tests indicated progression in mathematics but regression in language arts achievement.
Duration: June-December 1968.
Investigator(s): John L. Creswell, Ed.D., Associate Professor of Education, and Coordinator of Math Education, University of Houston, Houston, Tex. 77004.
Cooperating group(s): Hogg Foundation for Mental Health; Houston Independent School District; University of St. Thomas, Houston.
Publications: *The Arithmetic Teacher*, 1969.

24-QE-8 THE EFFICACY OF HOME ECONOMICS COURSES DESIGNED TO PREPARE DISADVANTAGED PUPILS FOR THEIR HOMEMAKER FAMILY MEMBER ROLE AND THE DUAL ROLES OF HOMEMAKER AND WAGE-EARNER

Purpose: To investigate the impact that can be made on poverty in urban areas by two newly designed home economics courses for disadvantaged students. One course prepares disadvantaged students for their roles as homemakers and family members in a changing society while the other prepares them for the dual roles of homemaker and wage-earner in occupations using home economics knowledge and skills.
Subjects: 12 experimental and 9 control groups of students from urban high schools enrolling large proportions of socioeconomically disadvantaged students in Connecticut, Indiana, Ohio, and New York.
Methods: This is a three-part cooperative study being conducted by investigators from Purdue, Cornell, and Ohio State Universities. Workshop for teachers selected to teach all but two of the experimental classes was held at Purdue where teachers were trained and materials developed. Curriculum materials were then combined, refined and prepared for dissemination, and evaluative materials selected and devised at Cornell. Six variations of presenting the experimental courses are used in evaluating the effectiveness of using the services of social and educational agencies and the effectiveness of the use of teaching materials by teachers who have not participated in their production or been trained in their use. Cornell and Ohio State are each testing half of the variations and Purdue is testing all six to provide replication. Students in experimental classes will be compared to controls in order to test the effectiveness of the courses. Each of the three research groups will gather and analyze data from their cooperating high schools, and an analysis of the combined data will then be made at Ohio State.
Duration: September 1967-October 1970.
Investigator(s): Phyllis K. Lowe, Chairman, Home Economics Education, Purdue University, Lafayette, Ind. 47907; Helen Y. Nelson, Ph.D., Associate Professor, Home Economics Education, Cornell University, Ithaca, N. Y. 14850; and Julia I. Dalrymple, Ph.D., Research, Home Economics Education, Ohio State University, Columbus, Ohio 43210.
Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: Article for American Vocational Education Journal and final report planned.

24-QE-9 EFFICACY OF EMPATHY TRAINING WORKSHOPS FOR HEAD START TEACHERS AND FAMILY WORKERS

Purpose: To improve communication of empathic understanding between staff members, staff and children, and staff and parents.
Subjects: Teachers, teacher aides, social workers, and family assistants enrolled in a summer 1968 Head Start training program.
Methods: Ten hours of training in which major sources of learning were integrated: observational (demonstration and modeling); didactic, feedback, and "shaping" processes (verbal descriptions, performance ratings, and successively approximating desired behaviors by building from simple to complex responses); and experimental (extensive role playing and on-the-job practice). Six groups, each involving around 12 trainees, were conducted. Results were evaluated from written responses to tape recorded statements administered before and after training.
Findings: There was statistically significant trainee improvement in empathic communication, from an average starting level of essentially shutting out others' expressions to an average posttraining level of nearly reflective responsiveness to others' feelings.

Duration: July-September 1968.
Investigator(s): Ralph Bierman, Ph.D., Associate Professor of Psychology, University of Waterloo, Waterloo, Ontario, Canada; Robert R. Carkhuff, Ph.D., Professor of Psychology, American International College, Springfield, Mass. 01109; and Muriel Santilli, M.S.W., Child Study Center, State University of New York, Buffalo, N. Y. 14222.
Publications: Publication is planned.

24-QE-10 A GROUP DAY CARE PROGRAM FOR CULTURALLY DEPRIVED CHILDREN AND PARENTS

Purpose: To evaluate the effectiveness of a two-year nursery-day care program (see Research Relating to Children, Bull. No. 18-Q-8) followed by three years of enriched public school education.
Subjects: Initial experimental group of 38 children (15 boys and 23 girls), three to three and one-half years of age when the program began in 1964; comparison group of 69 children of same age (32 boys and 37 girls); parents of both.
Methods: At end of preschool program children entered public school system, which is providing an enriched program consisting of educational teaching staff, special equipment and supplies, frequent trips to educational and recreational facilities, and essential social services to children and their families. Both groups of children are being given individual mental tests at yearly intervals. At end of three years in public school, children will be measured for school performance and achievement.
Duration: 1966-1969.
Investigator(s): Ira H. Cisin, Ph.D., Director, and Carol H. Newcomb, M.A., Social Research Group, George Washington University, Washington, D. C. 20006.
Cooperating group(s): D. C. Public School System; Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.
Publications: Children 15:4:135-143, July-August 1968.

24-QG-1 IMPACT OF GOVERNMENTAL PROGRAMS ON EMPLOYMENT OF YOUTH IN THE SEATTLE LABOR MARKET

Purpose: To analyze job market entry and experience of disadvantaged Seattle, Washington teenagers during a period of rapid regional economic expansion; to assess the effectiveness of various public agencies and special programs designed to facilitate the assimilation of this group into the labor force.
Methods: Teenagers were interviewed about their job market experience. Standard analytical techniques were used to relate data to factors relevant to success, including age, sex, race, family characteristics, and education. Special effort was made to determine the relative job effectiveness of youth who participated in training programs of various public agencies.
Duration: Not reported-August 1968.
Investigator(s): Stephen E. Baldwin, Ph.D. Candidate, and J. B. Gillingham, Ph.D., Department of Economics, University of Washington, Seattle, Wash. 98105.
Cooperating group(s): Office of Manpower Research, U. S. Department of Labor.

24-QH-1 EFFECTS OF A RESOURCE ROOM PROGRAM ON CHILDREN WITH SPECIFIC LEARNING DISABILITIES

Purpose: To investigate the value of a resource room approach to the remediation of neurological impairments in children, and to demonstrate this method as an efficient and economical technique with effectiveness coming from individual contact rather than special methodology.

Subjects: 72 boys and girls in grades one to six, with average or better I.Q.'s, and diagnosed as neurologically impaired.

Methods: After medical, psychiatric, educational, and psychological screening, children are placed in a resource room program with specially trained teachers. Instruction is given on a need basis related to the learning disability of the child and on a tutorial and semitutorial basis. Children spend the greater part of the school day in their regular classroom, and go to the resource teacher for one-half to one hour, two to three times weekly, depending on need. No specific methods are prescribed; emphasis is placed on individualization.

Findings: Findings indicate significant gains in achievement, reduction of frequency of academic failure, and little change in emotional overlay.

Duration: September 1967-June 1970.

Investigator(s): Lawrence H. Weiner, Ed.D., Director of Special Education and Pupil Personnel Services, Barrington Public Schools, Barrington, R. I. 02806.

Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

Publications: Journal publication planned.

24-QH-2 COMPREHENSION OF FULL LENGTH AND TELEGRAPHIC MATERIALS AMONG VISUALLY IMPAIRED AND NORMALLY SIGHTED CHILDREN

Purpose: To investigate the use of telegraphic materials (traditional materials which have been rearranged to omit certain low information words, phrases, and sentences) for instruction, and to determine their effect on the learning recall and retention of visually impaired and normally sighted children at different developmental levels.

Subjects: Blind, partial-, and normal-seeing children in grades 4, 7, and 10.

Methods: Materials are presented in braille, large print, and average print to meet the needs of the three student groups. Some pupils are taught with traditional materials, and others use those which appear in telegraphic form. Differences are noted for the amount of information recalled immediately after instruction and that which is retained after one week; ability of students to reconstruct the material learned is also determined. In addition, tests are conducted to determine the effectiveness of the telegraphic and traditional methods when materials are presented orally.

Investigator(s): Clessen J. Martin, Ph.D., Assistant Professor, Department of Counseling, Personnel Services, and Educational Psychology, Michigan State University, E. Lansing, Mich. 48823.

Cooperating group(s): Office of Education, U. S. Department of Health, Education, and Welfare.

24-QH-3 EARLY INTELLECTIVE TRAINING AND SCHOOL PERFORMANCE

Purpose: To determine the effects of intellective training of children at ages two and three upon subsequent performance in the first grade; to investigate the main and interactive effects of training, age of training, and social class on subsequent classroom performance; to determine the

relationships between training, age of training, later performance, and demographic characteristics of the subjects' families.
Subjects: 310 Negro boys, born in Manhattan during August, September, and October of 1964, of varying socioeconomic status.
Methods: During October 1966, 120 two-year-old boys were assessed. On the basis of their assessment scores, they were assigned to a Training or Discovery group, with 60 in each group. The means of the two groups were identical. All children were seen individually for two hours a week for seven months. The Training group was taught concepts related to length, position, number, size, form, etc.; the Discovery group interacted with the same instructors and materials for the same amount of time, but was not taught. After 42 sessions, the children were again assessed. A control group of 70 was assessed on the same measures. In October 1967 120 three-year-old boys began a procedure identical to that given the two-year-olds. All children will be assessed annually until they have completed the first grade.
Findings: It appears that participation in this type of program substantially benefits children at either age two or age three, that effects of the program for the two-year-olds are durable for at least one year, and that any well conceived and structured training may have equally beneficial effects, providing that the training is introduced early enough in the child's life, and that the systematic, uninterrupted, one-to-one relationship between instructor and child occurs for at least two hours per week over an extended period.
Duration: May 1966-June 1973.
Investigator(s): Francis H. Palmer, Ph.D., Professor of Psychology, Graduate Division, and Director, Institute for Child Development and Experimental Education, City University of New York, New York, N. Y. 10036.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Children 16:2:55-57, March-April 1969; Progress Reports May and August 1968, February 1967; Research Report No. 101, August 1968; other publications planned.

24-QH-4 ATLANTA ADOLESCENT PREGNANCY PROGRAM

Purpose: To establish a comprehensive, multidisciplinary program of educational and obstetrical care for young pregnant adolescents. (See Research Relating to Children, Bull. No. 23-NA-3.)
Subjects: 200 pregnant high school girls living in the Howard High School area; control group of 200 patients attending, or who attended before pregnancy, the Archer High School; both schools located in an indigent area of the city.
Methods: Will measure medical aspects, educational features, contraceptive usage, recidivism, and results of psychological testing.
Duration: July 1967-June 1970.
Investigator(s): James L. Waters, Jr., M.D., Department of Gynecology and Obstetrics, Emory University School of Medicine, Atlanta, Ga. 30303.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

SOCIAL SERVICES

24-RA-1 CHILD PLACEMENT STUDY

Purpose: To survey the number and type of children placed by child placement agencies; to evaluate the suitability of the present placement and to ascertain agency policy for admission; to examine trends in births, court commitments for neglect and dependency, and illegitimacy in order to determine if present numbers of placements will be adequate.
Subjects: A random sample of 420 children placed by all R. I. child placement agencies in institutions or foster homes as of January 1, 1968, not including children placed for treatment of physical or behavioral problems.
Methods: Caseworker responsible for each case completed a questionnaire indicating characteristics of the child and his family, agency treatment plans, and other agency involvement. A knowledgeable nonpartisan casework authority on child care read case records of a random subsample of 100 to determine if the present placement of the child is the most desirable and if the caseworker has properly diagnosed the child's problem.
Duration: September 1968-January 1969.
Investigator(s): James M. Gersitz, M.S.W., Planning Director, Rhode Island Council of Community Services, Inc., 333 Grotto Ave., Providence, R. I. 02906.
Cooperating group(s): Rhode Island Department of Social Welfare.
Publications: Report available from Rhode Island Council of Community Services, Inc.

24-RB-1 DEMONSTRATION OF THE EFFECTS OF PREVOCATIONAL ASSESSMENT AND VOCATIONAL EXPLORATION WITH INTENSIVE COMMUNITY FOLLOWTHROUGH ON A REPRESENTATIVE SAMPLE OF THE MENTALLY RETARDED AND JUVENILE DELINQUENT RESIDENTS OF THE D.C. CHILDREN'S CENTER

Purpose: To conduct a demonstration of the effects on institutionalized children of careful prevocational assessment and vocational exploration followed by intensive community followup.
Subjects: Representative sample of mentally retarded and juvenile delinquent residents of the District of Columbia Children's Center.
Methods: Residents included in study were selected upon admission and evaluated on various medical, social, educational, prevocational, and personality factors. Children spent at least six months at the institution, during which time they were exposed to a variety of social and prevocational experiences. Assessment similar to that given upon admission was made upon release, and subjects were then followed in the community for a maximum of two and one-half years. Comparison pertaining to vocational and social status was made between those who received the full service and a selected group who were not followed in the community.
Duration: November 1965-December 1968.
Investigator(s): Lewis P. Hartman, M.A., Section Chief, Department of Vocational Rehabilitation Unit, District of Columbia Children's Center, Laurel, Md. 20810; and Audrey A. Moore, M.S.W., Social Worker, District of Columbia Department of Vocational Rehabilitation, Washington, D. C. 20005.

Cooperating group(s): Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.
Publications: Final report, July 1969.

24-RB-2 AN EXPERIMENTAL STUDY OF CASEWORK METHODS AND PROCEDURES

Purpose: To examine the content of several casework methods, and to determine their relative effectiveness in alleviating problems in family functioning.
Subjects: 120 families who requested service from the Community Service Society of New York because of problems in marital or parent-child relationships and who met other criteria.
Methods: Families were randomly assigned to one of eight patterns of service. Patterns were combinations of preplanned brief service v. open-ended service, supportive v. modifying techniques, and individual v. joint interview with spouse. Data on family functioning and response to service were obtained primarily through research interviews at intake, closing of case, and six-month followup. Independent judgments were made by a second judge from the research interview tape. Service content was examined through content analysis of tapes of selected treatment interviews.
Findings: There was a better outcome from preplanned brief service than from open-ended service, and no significant difference in outcome of other modalities. There was little difference in content of service in cases assigned to supportive and modifying methods.
Duration: July 1964-July 1968.
Investigator(s): William J. Reid, D.S.W., Associate Professor, University of Chicago School of Social Service Administration, Chicago, Ill. 60637; and Ann W. Shyne, Ph.D., Director of Research, Child Welfare League of America, Inc., 44 E. 23rd St., New York, N. Y. 10010.
Cooperating group(s): Community Service Society of New York; Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.
Publications: *Brief and Extended Casework*, by W. Reid and A. Shyne. New York: Columbia University Press, May 1969; *Welfare in Review*, October 1967; *Social Casework*, November 1965.

24-RB-3 UTILIZATION OF COST AND TIME DATA IN A LOCAL COMMUNITY

Purpose: To analyze the utilization of the findings of the operational analysis conducted in 1966 (see *Research Relating to Children*, Bull. No. 19-RA-1); to validate a computerized system of collecting and analyzing time and cost data; specifically, to develop and evaluate methods of utilizing time and cost data; to incorporate program standards and develop qualitative yardsticks and service measures along with time and cost data to provide information for additional program analysis; to install cost procedures on a continuing basis and demonstrate to the agency and the community the values of comparing two years' data in the same agencies; to evaluate the differences and similarities of staffing services required between the initial installation of a computer-oriented system and its repetition in a second year; and to relate the findings of the initial analysis to other local community endeavors.
Methods: This study is building upon findings of the Chicago Child Welfare Cost Study, which was conducted in 21 children's institutions; this will include data from seven additional institutions.
Duration: 1967-December 1969.

Investigator(s): Leroy H. Jones, M.S.W., Indiana University School of Social Work, Bloomington, Ind. 47405, and Project Director, and Sidney E. Zimbalist, Ph.D., Research Director, Welfare Council of Metropolitan Chicago, 123 W. Madison St., Chicago, Ill. 60602.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-RC-1 SERVICES TO YOUNG FAMILIES--COMPREHENSIVE PROGRAM FOR UNMARRIED MOTHERS

Purpose: To identify the social and psychological factors in the backgrounds of unmarried teenage mothers and their families which contribute to pregnancy out of wedlock; to determine the validity of placing unwed pregnant girls in a separate school setting with a rehabilitation program provided by a multidisciplinary approach; to demonstrate the value of cooperative interagency action in meeting the needs of school-age expectant mothers; to measure the extent to which the program has been effective in meeting its goals.
Subjects: 50 pregnant girls in school; control group of 50 with similar backgrounds, pregnant, in school, and whose families are welfare recipients.
Methods: Extensive testing and interviewing were conducted upon entrance to the program, and at intervals thereafter; social, medical, and personal data were obtained through questionnaires; case records are kept on each girl. Comparisons will be made with control groups within and without the program. Separate evaluation of program design and operation, and of community participation, will be done through periodic progress reports and through a comparison of this program's effects with effects of other similar programs in the country.
Duration: November 1967-November 1969.
Investigator(s): Sandra B. McPherson, Ph.D., Research Director, and Mary O. Butcher, M.S.W., Project Director, Cuyahoga County Welfare Department, 220 St. Clair Ave., Cleveland, Ohio 44114.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-RD-1 INTEREST OF ADOPTIVE APPLICANTS IN THE HARD-TO-PLACE CHILD

Purpose: To help social agencies make full use of the potential of adoptive applicants for service to the hard-to-place child.
Subjects: Approximately 40 couples who had applied to two agencies for a child.
Methods: At the time of initial contact with the agency, each couple was administered a research schedule, in which they defined preference, interest in the hard-to-place child, and range of flexibility of choice.
Duration: May 1966-May 1969.
Investigator(s): Robert E. Young, M.S.S. (D.S.W. Candidate), Lecturer, University of Pennsylvania School of Social Work, Philadelphia, Pa. 19104.
Cooperating group(s): Child Care Service, Media; Association for Jewish Children, Philadelphia, Pa.
Publications: Results available through Research Center, or Library, University of Pennsylvania School of Social Work.

24-RE-1 GROUP FOSTER HOME

Purpose: To provide and evaluate a service for children who are being released from hospitalization but who cannot return to their communities at time of release for reasons of family instability, inadequate community educational supports, inadequately structured foster homes or group homes and residential settings, or the child's own psychological unreadiness for community living.
Subjects: Children, ages 9 to 16, ready for release from the Eastern State School and Hospital.
Methods: Four to six children, mixed in race and sex but structured so as to be conducive to producing healthy family involvements and interactions, are placed in two-parent foster home settings approximating a natural family unit. The mother is required to remain at home while the group foster father is gainfully employed. Homes are structured to fill in the gaps in community services, and to provide an atmosphere which is necessary for the child's psychological, educational, and social needs. Once a month, the foster mother completes a behavioral rating scale on each child, which is used as a measure of the stability of the child in the home, and also guides social workers in working more closely with the child in the areas of his deficiency.
Findings: Several children have made adequate adjustments in the public schools and have been accepted by their peers in the communities where they are residing.
Duration: September 1965-August 1969.
Investigator(s): M. V. Kleinman, M.D., Superintendent, Herman Banner, M.S.S.A., Director of Social Service, Lydia Schut, M.D., and Edward O'Connor, Social Worker, Eastern State School and Hospital, Trevose, Pa. 19047. (Reported by Samuel M. Mintz, Research Coordinator, Eastern State School and Hospital.)
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Final report planned.

24-RE-2 A STUDY OF PREDICTORS OF SUCCESS IN FOSTER CARE

Purpose: To test the utility of certain characteristics of foster parent applicants in predicting the eventual relative success of these parents, and to determine the interaction of important intervening variables with these characteristics; to understand the process of foster care as reported periodically by the parents during their first experience.
Subjects: 6- to 12-year-old children.
Methods: Characteristics of the parents will be determined by systematic individual interviews early in the home study process; the intervening variables are the characteristics of the foster child, the contribution of the caseworker, the role of the natural family, etc. The new foster homes will be studied for 18 months; the criteria of success of the placements will be the evaluations made by the caseworkers, changes in behavior of the child as reported by caseworker and foster parent, and independent evaluations of foster parent-child interactions based on foster parents' verbatim descriptions of behavior incidents.
Duration: July 1968-June 1972.
Investigator(s): Patricia W. Cautley, Ph.D., Director, Foster Homes Research Project, State Department of Health and Social Services, Madison, Wis. 53702.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-RE-3 THE NEED FOR FOSTER CARE

Purpose: To determine the incidence of requests for foster care, the circumstances underlying the requests, and their disposition.

Subjects: All requests (1,580) for foster care received during a three-month period of 1966 by social agencies in seven representative communities in the United States.

Methods: An initial schedule, completed by the caseworker handling each case, gave reason for request and data about the child. Four months later or when a decision had been made, if earlier, caseworker completed a more extensive schedule giving information about the child, his family, actual plan for handling request, and plan considered ideal.

Findings: Services were unevenly available across communities. Response to request was affected by economic and ethnic factors as well as by needs of child.

Duration: July 1965-October 1968.

Investigator(s): Ralph W. Colvin, Ph.D., Johnny Cake Community, Family and Child Center, Fort Smith, Ark., (formerly) Research Director, Child Welfare League of America, Inc., 44 E. 23rd St., New York, N. Y. 10010. (Reported by Ann W. Shyne, Ph.D., Research Director, Child Welfare League of America.)

Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

Publications: The Need for Foster Care. New York: Child Welfare League of America, Inc., 1969.

24-RF-1 THE DAY CARE OF CHILDREN IN CANADA

Purpose: To examine the status of day care facilities in Canada in terms of organization, personnel, clientele, and legislative regulation.

Subjects: 558 day care facilities in 104 Canadian cities.

Methods: Structured interviews using general questionnaire, staff census, child census, and facility and equipment profile. Analysis of total community service coverage in two cities, and of pertinent provincial and municipal legislation and regulations.

Duration: January 1968-June 1969.

Investigator(s): C. W. Portal-Foster, Ph.D., Director, and Joanna M. Sherman, M.S.S.W., Research Associate, Research Branch, Canadian Welfare Council, 55 Parkdale Ave., Ottawa 3, Ontario, Canada.

Cooperating group(s): Department of National Health and Welfare, Canada.

Publications: Report to be published, 1969.

24-RF-2 A RESEARCH PROGRAM IN COMPREHENSIVE DAY CARE

Purpose: To study all aspects of needs of young children in cognitive development, basic health, and sound motivational approach to learning.

Subjects: Infants and children through sixth grade, ultimate plan to include 200 preschool children.

Methods: The pilot study is being completed, with 30 children under four in day care. The day care setting will be used to provide comprehensive care, including educational and health services, and to study methods and evaluate the use of various types of personnel needed to give effective long-range care. Children from a cross-section of the population will be followed from birth through sixth grade, using various parameters of evaluation to determine basic needs in all areas of growth and development. A small "equivalence" group will also be followed with health care and periodic psychometric evaluation.

Investigator(s): Earl Siegel, M.D., Professor, and Ann DeHuff Peters, M.D., Associate Professor, Maternal and Child Health, School of Public Health; Donald M. Wood, Ph.D., Assistant Professor of Psychology in Psychiatry, and Frank A. Loda, M.D., Assistant Professor of Pediatrics, School of Medicine; Joseph J. Sparling, Ph.D., Assistant Professor of Education; and Paul Scagnelli, Ph.D., Assistant Professor, Institute for Child and Family Development, Frank Porter Graham Center, University of North Carolina, Chapel Hill, N. C. 27514.
Cooperating group(s): A public elementary school; Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-RF-3 DAY CARE: AN INSTITUTIONAL ANALYSIS

Purpose: To study the institutional framework within which day care programs operate; specifically, to determine how a community gets day care, and what factors determine quality in a day care program.
Subjects: Four proprietary, two nonprofit, and two public day care centers.
Methods: A conceptual framework has been developed and data gathered on the history of group day care, on individual centers under different kinds of sponsorship, on the role of public agencies in administration, licensing, and legislation, on teacher education, and on professional leadership in day care.
Duration: November 1964-June 1969.
Investigator(s): Elizabeth Prescott, M.A., Sociologist, Research Director, and Elizabeth Jones, Ph.D., Sociologist, Research Associate, Pacific Oaks College, Pasadena, Calif. 91105.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-RF-4 FIELD STUDY OF THE NEIGHBORHOOD FAMILY DAY CARE SYSTEM

Purpose: To determine how neighborhood intervention can stabilize and enrich child care situations; specifically, to study the problem of discontinuity of care in private family day care arrangements.
Subjects: Mothers, their children under six; women who provide care (sitters).
Methods: Intervention is carried out through the Day Care Neighbor Service, which provides professional consultation to a network of neighborhood women. These day care neighbors assist neighborhood mothers in working out and maintaining day care arrangements. Study will identify different kinds of arrangements between mothers and sitters, determine characteristics of each and of the interactions that relate to satisfaction and continuity; make special comparisons of discontinuous and low quality care, and determine how protective responsibilities are assumed informally by neighborhood women.
Duration: March 1967-February 1970.
Investigator(s): Arthur C. Emlen, Ph.D., Associate Professor of Social Work, Rolfe LaForge, Ph.D., Professor of Psychology, Portland State College; Alice H. Collins, Director, Day Care Neighbor Service; Betty Donoghue, B.A., Research Associate, Tri-County Community Council, 718 S. W. Burnside, Portland, Ore. 97209.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-RH-1 PROTECTING THE CHILD VICTIM OF SEX CRIMES COMMITTED BY ADULTS

Purpose: To determine and evaluate the psychosocial consequences of sex victimization; to explore the circumstances contributing to the occurrence; to assess the impact on child and family of the legal procedures for prosecuting the offender.
Subjects: Child sex victims in five selected communities in the United States; their parents.
Findings: Early tentative trends show: (1) sex victimization of children is associated with antecedent family disorganization and pathology which tends to produce elements of neglect and/or lessening of the quality of parental supervision; (2) in 3 out of 10 cases, mothers of child victims were themselves victimized sexually as children; (3) in none of the cases did the child require medical attention or hospitalization; (4) the problem of incest occurs at least eight times more frequently than officially reported; (5) in 86 percent of the cases the offender was either a relative by blood or marriage, a friend, neighbor, or a worker in the neighborhood; (6) median age for girl victims is 11.9 years, rising slightly for rape victims and dropping slightly for victims of incest or lesser abuses.
Duration: July 1965-September 1968.
Investigator(s): Vincent DeFrancis, Director, Yvonne Tormes and Everald Walsh, Social Researchers, and Jo Fine, Assistant Researcher, Children's Division, American Humane Association, Box 1266, Denver, Colo. 80201.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-RI-1 UTILIZATION AND APPRAISAL OF SOCIOBEHAVIORAL TECHNIQUES IN SOCIAL WELFARE--PILOT PHASE

Purpose: To complete necessary, preparatory activities to make it possible to launch a demonstration and research project to examine the utility of selected sociobehavioral techniques in social welfare.
Subjects: Children and parents served by selected family service welfare agencies.
Methods: Selected sociobehavioral techniques relating to the assessment, monitoring, and achievement of change in the programming of family members to serve as primary or auxiliary agents for the modification of behavior of other family members; associated behavioral research techniques.
Duration: May 1968-August 1969.
Investigator(s): Edwin J. Thomas, M.S.W., Ph.D., Professor of Social Work and Psychology, University of Michigan School of Social Work, Ann Arbor, Mich. 48104.
Cooperating group(s): Family Service of Ypsilanti and other agencies serving families in Michigan.
Publications: Reports, papers, and articles are planned when findings are available.

HEALTH SERVICES

24-SA-1 SURVEY OF PRACTICES AND OPINIONS OF AMERICAN OBSTETRICIANS ON THE UTILIZATION OF ALLIED HEALTH WORKERS IN MATERNITY CARE

Purpose: To study the physician's activities, practice characteristics, office employment patterns (including type of personnel assigned to selected specific patient care services in the office and in hospital labor and delivery rooms), and his opinions concerning use of nonphysician personnel in maternity and gynecologic care.
Subjects: Obstetrician-gynecologists.
Methods: A precoded short-answer questionnaire will be mailed to a 20 percent random sample of active physicians, with two followup mailings to nonrespondents. Data will be analyzed by geographic region and urban-rural location. Cross-tabulations will relate such factors as physician characteristics (ACOG Fellows), practice characteristics (solo/group), practice volume, employed personnel, and hospital characteristics to utilization of nonphysician personnel and to opinions on such utilization. Job market potential for maternity nurses in obstetrics-gynecology will be estimated.
Duration: November 1967-October 1969.
Investigator(s): Alfred Yankauer, M.D., M.P.H., Senior Research Associate, Department of Maternal and Child Health, and Jacob J. Feldman, Ph.D., Associate Professor, Department of Biostatistics, Harvard School of Public Health, Boston, Mass. 02115; Louis M. Hellman, M.D., Professor and Chairman, Department of Obstetrics and Gynecology, State University of New York, Downstate Medical Center, Brooklyn, N. Y. 11203.
Cooperating group(s): American College of Obstetricians and Gynecologists; Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-SA-2 EVALUATION OF NUTRITIONAL STATUS OF PRESCHOOL CHILDREN IN THE UNITED STATES

Purpose: To conduct a two-year nationwide study of the nutritional status of preschool children in the U. S.
Methods: Two pilot studies have been completed, one involving 150 children in Columbus, Ohio and the second, 600 children in Mississippi. Data from these studies, collected during a three-day period, provide information on food consumption, nutrient intake, socioeconomic and medical background, measurements of height and weight, and a general health appraisal of each child. Specimens of blood (4 ml.) from virtually all of the children were tested on some 15 hematological and biochemical tests; urine specimens from three-fourths of the children will also be examined.
Duration: July 1966-June 1970.
Investigator(s): George M. Owen, M.D., Associate Professor, Carl E. Nelsen, M.D., Assistant Professor, Phil J. Garry, M.S., Research Associate in Biochemistry, Kathryn M. Hedges, R.N., M.S., Research Associate in Nutrition, Department of Pediatrics, College of Medicine; and Jay E. Lowe, Ph.D., Sociologist, Department of Sociology, Ohio State University, Columbus, Ohio 43210.

Cooperating group(s): Children's Hospital and Children's Hospital Research Foundation, Columbus; Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.
Publications: Reports on the two pilot studies completed; preliminary report on first study presented at American Public Health Association Meeting, October 1967.

24-SD-1 A COMPREHENSIVE EVALUATION OF HIGH-RISK PREGNANCIES

Purpose: To reduce perinatal mortality and morbidity by determining the factors which contribute to high-risk pregnancy and by taking steps, where possible, to correct unfavorable fetal environment.
Subjects: High-risk pregnant women and their infants; controls.
Methods: High-risk pregnancies and controls are evaluated from 30th week of gestation with endocrinological, biochemical, and biophysical techniques at weekly intervals. During labor and delivery, biophysical, biochemical, and anesthetic studies of mother and fetus are made, and in immediate neonatal period, similar biochemical and biophysical studies are done on newborn, who is then followed at one, three, five, and eight years with physical, neurological, and psychological examinations.
Duration: February 196[illegible]-January 1971.
Investigator(s): Edward H. Hon, M.D., Associate Professor of Obstetrics and Gynecology, Yale University School of Medicine, New Haven, Conn. 06510.
Cooperating group(s): National Institute of Child Health and Human Development, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: To be published in *American Journal of Obstetrics and Gynecology*.

24-[illegible]-2 WALK-IN OBSTETRICAL DELIVERIES AT A SUBURBAN HOSPITAL: A COMPARATIVE STUDY OF COMPLICATIONS AND CAUSES

Purpose: To examine the ramifications of three different modes of obstetrical delivery in hospitals--private, clinic, and walk-in (emergency); specifically, to determine whether the medical profession's alarm over the number of walk-in deliveries is warranted, why walk-in mothers do not seek obstetric care, and why the continuity of care has broken down for those who have received some prenatal care.
Subjects: Mothers listed on the Delivery Room Register at a local suburban county hospital.
Methods: Record survey from Delivery Room Register and interview survey.
Duration: 1966-1968.
Investigator(s): Ann C. Maney, Ph.D., Project Director, Personal and Social Organization Section, Mental Health Study Center, 2340 University Blvd. E., Adelphi, Md. 20783.
Cooperating group(s): University of North Carolina School of Public Health; Maryland Psychiatric Institute, Baltimore, Md.
Publications: Journal articles and report planned.

24-SD-3 GENETIC AND SOCIOECONOMIC FACTORS IN EARLY AND LATE FETAL DEATH

Purpose: To determine the effect of genetic and socioeconomic factors on pregnancy wastage, and whether an etiological distinction can be made between early and late fetal deaths.
Subjects: Records of 1,877 early and late fetal deaths.

Methods: After producing records, computer program matched them with study variables such as prior pregnancy history of mother, parity, socioeconomic factors, and history of medications and diseases. Resulting information will be subjected to a discriminant function analysis.
Duration: 1968-June 1969.
Investigator(s): N. C. Myrianthopoulos, Ph.D., Head, Section on Epidemiology and Genetics, Perinatal Research Branch, National Institute of Neurological Diseases and Stroke, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Md. 20014.

24-SD-4 INTER-AMERICAN INVESTIGATION OF INFANT AND CHILD MORTALITY--CALIFORNIA STUDY

Purpose: To compile child mortality statistics for the San Francisco Bay Area as part of a study of comparative mortality statistics in various urban and rural locations in the Americas being conducted by the Pan American Health Organization.
Subjects: All deaths of infants and children, ages one week to five years, occurring in six counties between January 1, 1969 and December 31, 1970; probability sample of living children at risk from the same area selected over the same period of time.
Methods: Each death will be investigated to verify the exact cause of death, previous health and nutritional history of the child, patterns of medical and health care, and demographic, social, and economic characteristics of the family and community. A similar investigation of the health, nutrition, and environment of each of the children in the probability sample will be carried out. Interviews with parents and health professionals will supplement record reviews.
Duration: July 1968-June 1971.
Investigator(s): Helen M. Wallace, M.D., M.P.H., Professor of Maternal and Child Health, and Ira W. Gabrielson, M.D., M.P.H., Clinical Professor of Maternal and Child Health, University of California School of Public Health, Berkeley, Calif. 94720.
Cooperating group(s): Pan American Health Organization; Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-SD-5 EVALUATION STUDIES ON MATERNAL AND INFANT CARE PROJECTS

Purpose: To evaluate some of the biological benefits associated with the present and immediate postpartum care components of the maternity and infant care system.
Methods: Protocols have been designed, field tested, and used to assess the effectiveness and quality of maternity care provided by the Maternity and Infant Care projects authorized by the Children's Bureau, and to assess the family planning services. Thirteen projects were selected from a total of 53. The population served will be characterized by age, parity, history of smoking, and height-weight (usual) relationship. For each project the pregnancy outcome (extent of prematurity) will be determined for defined risk categories. A risk-adjusted outcome index will include percent premature, mean birth weight, percent low-Apgar, and neonatal mortality rate. The index will then permit between-project comparisons which will be independent of the variable population served. Comparisons will also be possible between participating projects and non-MIC patient groups, based on outcome comparisons for risk-adjusted groups. Field audits will be made to describe the organization for delivery of service and the extent and quality of service rendered.

Duration: July 1964-June 1970.
Investigator(s): Matthew Tayback, Sc.D., Project Director, George Entwisle, M.D., Assistant Director, and J. Richard Hebel, Ph.D., Chief Biostatistician, University of Maryland School of Medicine, Baltimore, Md. 21201.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-SD-6 UTILIZATION OF PRENATAL SERVICES IN PUERTO RICO

Purpose: To study the utilization of prenatal services, quality of prenatal care, and types of utilizers (private, government, nonusers).
Subjects: 7,486 women, in urban and rural sections of Puerto Rico.
Methods: Women were interviewed in their homes, and clinical prenatal records examined; data tabulated and analyzed. To determine the nature and kind of expected discrepancies, 197 cases were reinterviewed and 50 records reexamined. A reanalysis is being made which will include a cross-tabulation of the kinds of utilizers with educational level. Consultation services will be obtained from specialists in maternal and child health, the social sciences, obstetrics and gynecology, and demography.
Duration: July 1966-September 1969.
Investigator(s): Antonio S. Medina, M.D., M.P.H., Associate Professor in Maternal and Child Health, University of Puerto Rico School of Medicine, Rio Piedras, P. R. 00928.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.
Publications: Final report, June 1969.

24-SD-7 OPERATIONAL AND DEMOGRAPHIC ANALYSIS FOR MATERNAL AND CHILD HEALTH PROJECT

Purpose: To maintain and develop data files related to maternal and child health and provide computer access and analysis of such data.
Methods: The file includes Census data for counties and cities along with information on births and deaths and provides a way of collating this information by computer. All files are maintained for computer use, and programs have been developed to provide access and analysis.
Findings: Data have been prepared distributing the counties of the United States according to the number of infant deaths in excess of those expected by counties below a selected point on the distribution.
Duration: October 1965-continuing.
Investigator(s): Roland R. Bonato, Ph.D., Project Director, and Margaret W. Pratt, B.A., Assistant Director, George Washington University, Washington, D. C. 20006.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-SF-1 THE INFLUENCE OF NONPROFESSIONAL HOSPITAL VOLUNTEER EXPERIENCE ON THE CAREER CHOICES AND CERTAIN ATTITUDES OF HIGH SCHOOL STUDENTS

Purpose: To investigate influences of volunteer experiences in a mental hospital upon high school students' vocational plans and attitudes toward mental illness.
Subjects: Volunteer high school students.

Methods: Cohen and Struening's Opinions About Mental Illness Scale is administered, and each student's thoughts about his career plans are determined before and after his summer volunteer work at hospital. Pre- and postmeasures are compared and examined for any significant changes in these two areas.
Duration: June 1968-June 1969.
Investigator(s): Roy A. Eck, Ph.D., Staff Psychologist, and Sam Ellington, B.A., Chief, Volunteer Service, Veterans Administration Hospital, Salem, Va. 24153.

24-SF-2 A FAMILY PLAN BROCHURE AND ITS USE

Purpose: To prepare and test the effectiveness of a family planning brochure.
Subjects: Clients of two family planning clinics.
Methods: On the basis of the number of children and the space between each child desired by the couple, a detailed program of contraception, prenatal and postnatal behavior, will be written for each couple as their "Family Plan". A copy will be kept in the clinic and used for followup with the couples to help them realize their personalized plan. Alternate clients in two clinics will be selected. Two evaluation indices will be developed to measure family planning program success, using the Family Plan: (1) number of months families remain on Plan/number of months of use of Plan, and (2) number of patients who discontinue Plan. Effectiveness of procedure will be measured by clinic records and continuity of contraceptive practice among those using and those not using the Plan. Program weaknesses will be determined by a followup of families who discontinue Plan.
Duration: May 1969-not reported.
Investigator(s): Mayhew Derryberry, Ph.D., Professor in Residence, Health Education Division, University of California School of Public Health, Berkeley, Calif. 94720.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-SF-3 SYSTEMS ANALYSIS OF PEDIATRICIAN EFFICIENCY

Purpose: To promote more efficient use of physicians in the pediatric clinics; specifically, to increase the capability of the physician to administer to the health needs of a greater number of children in a clinical environment without sacrifice in the quality of care and in the relationship between physician and patient.
Methods: Systems analysis techniques are being applied to identify and, when applicable, modify current procedures and techniques. Revisions will be evaluated and tested to determine to what extent the objective is being met.
Duration: July 1967-June 1972.
Investigator(s): Robert E. Cooke, M.D., Chairman, Catherine Neill, M.D., Associate Professor of Pediatrics, Henry M. Seidel, M.D., and Robert Drachman, M.D., Assistant Professors, Department of Pediatrics, Johns Hopkins University School of Medicine; and Neil H. Sims, M.D., Director, Pediatric Ambulatory Services, Johns Hopkins Hospital, Baltimore, Md. 21205.
Cooperating group(s): Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.

24-SG-1 A PARENT-CHILD APPROACH TO MENTAL HEALTH

Purpose: To plan an integrated parent-child approach designed to build and maintain mental health; specifically, to increase the emotional and mental growth of young children through appropriate experiences in home and school involving a close relationship with parents and utilizing selected community resources, and to strengthen family living through experiences based on principles of child growth and development.

Methods: Research was extensively reviewed, and observation visits made to similar programs. Services of consultants in preschool and early childhood education, mental health, pediatrics, family life, and other appropriate fields were utilized. Special facilities, equipment, and resources were designed, and all data synthesized into a blueprint.

Findings: Plan developed was a feasible one for demonstration.

Duration: July 1967-August 1968.

Investigator(s): Harold E. Moore, Ed.D., and Irving W. Stout, Ed.D., Professors of Education, Arizona State University College of Education, Tempe, Ariz. 85281.

Cooperating group(s): Educational Facilities Laboratories, Inc.; Avondale and Litchfield Park, Ariz. School Districts; National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: Mimeographed reports, College of Education, Arizona State University.

24-SG-2 THE CENTER FOR PREVENTIVE PSYCHIATRY

Purpose: To develop and evaluate a new service program to help healthy persons remain emotionally well, and to provide early treatment at the youngest possible age.

Subjects: About 100 persons a year, with preference given to very young children.

Methods: An attempt is made through a program of professional education and public relations to interest healthy persons in the value of counseling and psychotherapy during high-risk situational crises such as recent bereavement and severe illness in the family. Special techniques are used for facilitation of mourning throughout childhood. An innovative program has been developed for preschoolers by which a psychoanalyst works in a nursery classroom group setting.

Findings: In the first three years of the program the majority of applicants were chronically disturbed. By the end of three years, the percentage of those recently stressed rose to about 30 percent.

Duration: September 1965-continuing.

Investigator(s): Gilbert W. Kliman, M.D., Director, and Myron Stein, M.D., Associate Director, The Center for Preventive Psychiatry, 340 Mamaroneck Ave., White Plains, N. Y. 10605.

Cooperating group(s): Foundation for Research in Preventive Psychiatry; W. T. Grant Foundation; Foundation for Research in Psychoanalysis; Scheuer Foundation; Cleveland Foundation.

Publications: *Psychological Emergencies of Childhood*, by Gilbert W. Kliman. New York: Grune and Stratton, 1968; articles planned in *American Journal of Orthopsychiatry* and other psychiatric journals.

24-SH-1 MODIFICATION OF HIGH-RISK BEHAVIOR IN CHILDREN

Purpose: To determine the types of behavior children consider high risk or hazardous, and to evaluate the efficiency of various methods such as films, lectures, etc., used in modifying such behavior.

Subjects: Approximately 1,000 boys and girls in kindergarten, third and fifth grades from schools in several locations.
Methods: Carefully staged photographs have been taken of children in a variety of situations commonly considered hazardous. Scaling techniques have been developed which will allow children to rank these photographs in terms of the degree of hazard they think is inherent in the situation photographed. The ratings of the children are being analyzed as a function of age, sex, and socioeconomic background. Modification of perception of hazard will be attempted by films, lectures, etc.
Duration: June 1968-May 1970.
Investigator(s): N. W. Heimstra, Ph.D., Professor of Psychology, University of South Dakota, Vermillion, S. D. 57069.
Cooperating group(s): Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Findings will be published in an appropriate journal.

ORGANIZATIONS

ALABAMA

- Tuskegee Institute 24-OF-2

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- Arizona State University
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  - Department of Psychology 24-HH-2

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- California State College, Los Angeles
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  - Department of Special Education 24-GE-4
- California Youth Authority 24-KR-1
- Chico State College
  - Department of Psychology 24-DC-1
- Children's Hospital and Adult Medical Center 24-GC-3
- Claremont Graduate School and University Center 24-QE-3
- Fairview State Hospital 24-HA-3
- Far West Laboratory for Educational Research and Development 24-QE-5
- Kaiser Foundation Hospital 24-AA-5
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- University of Colorado
  - Center for Student Life Programs and Studies 24-OF-4

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- Yale University
  - School of Medicine 24-SD-1

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  - Bureau of Social Research 24-QE-4
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- University of Michigan
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- Western Michigan University
  - Department of Sociology 24-FA-1

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- University of Minnesota
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  - Department of Biochemistry 24-HF-2
  - School of Dentistry 24-HF-2

MISSOURI

- Washington University
  - School of Medicine 24-JC-1

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- University of Nebraska
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    - Nebraska Psychiatric Institute 24-HK-1

NEVADA

- University of Nevada 24-EB-1

NEW HAMPSHIRE

- University of New Hampshire
  - Department of Sociology 24-DF-2

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- Newark State College
  - Department of Psychology 24-PB-8
- Rutgers, The State University
  - Douglass College
    - Psychological Clinic 24-JG-2

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  - Department of Psychology 24-DE-1

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- City University of New York
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- Columbia University
  - Bureau of Applied Social Research 24-NB-1
- Cornell University
  - Center for Research in Education 24-DB-2
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    - Department of Sociology 24-FD-2, 24-OD-1
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- Syracuse University
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- Union College
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NORTH CAROLINA

- University of North Carolina
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  - Frank Porter Graham Center 24-RF-2
  - School of Education 24-RF-2
  - School of Medicine 24-RF-2
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OHIO

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- Case Western Reserve University
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  - School of Medicine 24-AA-12
- Columbus State School 24-CC-2
- Cuyahoga County Welfare Department 24-RC-1
- Ohio State University
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  - Department of Sociology 24-SA-2
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- Eastern Oregon College 24-HE-1
- Lane County Mental Health Clinic 24-HC-2
- Portland State College 24-RF-4
- State Board of Control 24-GE-1
- State School for the Deaf 24-GE-1
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  - School of Health, Physical Education, and Recreation 24-AA-7

PENNSYLVANIA

- Bryn Mawr College
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- Drexel Institute of Technology 24-PB-4
- Eastern State School and Hospital 24-RE-1
- Pennsylvania State University
  - Institute for Research on Human Resources 24-OI-1
- Philadelphia Center for Craniofacial Biology 24-AA-9
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- Temple University
  - College of Education 24-PB-4
  - Community Mental Health Research Office 24-GE-1
  - Department of Health, Physical Education, and Recreation 24-CG-1
- University of Pennsylvania
  - Division of Graduate Medicine 24-AA-9
  - School of Social Work 24-RD-1
- University of Pittsburgh
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RHODE ISLAND

- Barrington Public Schools 24-QH-1
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SOUTH DAKOTA

- University of South Dakota
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TENNESSEE

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TEXAS

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- University of Houston
  - College of Education 24-QE-7
  - Department of Psychology 24-DE-4, 24-DH-2
- University of Texas
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UTAH

- Brigham Young University
  - Department of Education 24-DC-11
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VIRGINIA

- Hollins College
  - Department of Psychology 24-CH-1

WASHINGTON

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WYOMING

- University of Wyoming
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NATIONAL

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RESEARCH NOTES

CENTERS FOR DEAF-BLIND CHILDREN

The Office of Education has announced a program to support the establishment of centers to serve deaf-blind children. In addition to providing services, the centers will also make possible the development of new ways of reaching these children and their parents through research. For further information, write to the Project Centers Branch, Division of Educational Services, Bureau of Education for the Handicapped, Office of Education, U. S. Department of Health, Education, and Welfare, Washington, D. C. 20202.

THE COMMITTEE ON BASIC RESEARCH IN EDUCATION

The Committee on Basic Research in Education, sponsored jointly by the Office of Education of the U. S. Department of Health, Education, and Welfare, the National Academy of Sciences, and the National Academy of Education, has announced a new program of grants to support basic research in education. This program hopes to encourage research that will contribute to fundamental knowledge and understanding of the "critical problems in educational theory, policy, and practice". Research funds are provided by the Office of Education. For further information, write to The Committee on Basic Research in Education, Division of Behavioral Sciences, National Academy of Sciences--National Research Council, 2101 Constitution Ave., N. W., Washington, D. C. 20418.

THE E. C. BROWN CENTER FOR FAMILY STUDIES

The E. C. Brown Trust Foundation and the University of Oregon's School of Community Service and Public Affairs has announced the establishment of the E. C. Brown Center for Family Studies for education, research, service, and development of professional personnel in family life and human sexuality. For further information, write the E. C. Brown Center for Family Studies, University of Oregon, Eugene, Ore. 97403.

THE FAMILY INSTITUTE OF CHICAGO

The Family Institute of Chicago, established in 1968 as a division of the Kramer Foundation, will provide an administrative framework for a series of research and educational activities relating to the family. For further information, write to the Institute, located at 417 North Kenilworth Ave., Oak Park, Ill. 60302.

OTHER ABSTRACTING JOURNALS AND SERVICES

Abstracts of Hospital Management Studies (quarterly), the Cooperative Information Center of Hospital Management Studies, University of Michigan, 220 E. Huron St., 419 City Center Bldg., Ann Arbor, Mich. 48108.

AFB Research Index, American Foundation for the Blind, 15 W. 16th St., New York, N. Y. 10011.

Child Development Abstracts and Bibliography, Child Development Publications, Society for Research in Child Development, Inc., Purdue University, Lafayette, Ind. 47907.

Communication Disorders, Information Center for Hearing, Speech, and Disorders of Human Communication, The Johns Hopkins Medical Institutions, 310 Harriet Lane Home, Baltimore, Md. 21205.

Digest of Neurology and Psychiatry, Institute of Living, Hartford, Conn. 06102.

Dissertation Abstracts, University Microfilms, Ann Arbor, Mich. 48103. (Gives synopses of U. S. doctoral dissertations with an annual index.)

dsh Abstracts, Deafness, Speech and Hearing Publications, Gallaudet College, Washington, D. C. 20002.

Epilepsy Abstracts, National Institute of Neurological Diseases and Stroke, Public Health Service, Building 31, Room 8A-16, Bethesda, Md. 20014.

Excerpta Criminologica, Excerpta Criminologica Foundation, Rapenburg 38, Leiden, The Netherlands.

Inventory of Social and Economic Research in Health, Health Information Foundation, 5555 S. Ellis Ave., Chicago, Ill. 60637.

Language and Language Behavior Abstracts (quarterly), Center for Research on Language and Language Behavior, University of Michigan, Ann Arbor, Mich. 48104. Annual subscription $22.50. Order from Subscription Manager, LLBA, Meredith Publishing Co., 440 Park Ave. S., New York, N. Y. 10016.

Listing of Health and Welfare Research Projects in Local Communities, United Community Funds and Councils of America, Inc., 345 E. 46th St., New York, N. Y. 10017.

Nursing Research, American Journal of Nursing Co., 10 Columbus Circle, New York, N. Y. 10019.

Nutrition Abstracts and Reviews, Rowett Research Institute, Bucksburn, Aberdeenshire, Scotland.

Poverty and Human Resources Abstracts (bimonthly), Institute of Labor and Industrial Relations, University of Michigan-Wayne State University, P. O. Box 1567, Ann Arbor, Mich. 48106. Annual subscription $40.00.

Psychological Abstracts, American Psychological Association, 1333 - 16th St., N. W., Washington, D. C. 20036.

Rehabilitation Literature, National Easter Seal Society for Crippled Children and Adults, 2023 W. Ogden Ave., Chicago, Ill. 60612.

Research and Study Projects Reported by FSAA Member Agencies, Family Service Association of America, 44 E. 23rd St., New York, N. Y. 10010.

Sociological Abstracts, Leo P. Chall, 15 E. 31st St., New York, N. Y. 10016.

Through the Educational Resources Information Center (formerly the Educational Research Information Center), better known as ERIC, current research and research-related information will be made available to teachers, administrators, researchers, commercial organizations, and others. ERIC also includes eighteen clearinghouses, or documentation centers, located at universities and other institutions throughout the country. Each clearinghouse will concentrate on a different subject-matter area. More complete information may be obtained by writing to the Director of ERIC, Office of Education, U. S. Department of Health, Education, and Welfare, Washington, D. C. 20202.

The Excerpta Medica Foundation, New York Academy of Medicine Building, 2 E. 103rd St., New York, N. Y. 10029, and 119-123 Herengracht, Amsterdam C, The Netherlands, has established an abstracting service on pediatrics on a yearly subscription basis. In addition to abstracts, the Foundation can provide to subscribers, at cost, photocopies and translations of complete articles.

The Human Relations Area Files have classified cultural data on primitive and non-primitive societies into 710 categories of human behavior. Complete sets of all files are available in 22 member institutions in the United States. For information, write to Dr. Clellan S. Ford, President, Human Relations Area Files, Yale University, New Haven, Conn. 06520.

The Minnesota Family Study Center can supply to interested scholars bibliographic information from the Inventory of Published Research in Marriage and Family Behavior. Requests for information should be addressed to the Director, Inventory of Published Research in Marriage and Family Behavior, Social Science Tower 1026, University of Minnesota, Minneapolis, Minn. 55455.

The Library of the National Easter Seal Society for Crippled Children and Adults has initiated a photoduplication service for persons engaged in rehabilitation research. It is available without charge to personnel in educational or research institutions and health or welfare agencies, public or private. This service hopes to provide the necessary professional literature not available in local libraries. Further information may be obtained by writing to the Librarian of the Society, 2023 W. Ogden Ave., Chicago, Ill. 60612.

The Science Information Exchange, Smithsonian Institution, 209 Madison National Bank Bldg., 1730 M St., N. W., Washington, D. C. 20036, provides to qualified investigators, on request, selected abstracts of current research supported by foundation or government grants. The Exchange covers such fields as medicine, nursing, public health, nutrition, psychology, education, anthropology, mental health, and intercultural relations.

The World Federation for Mental Health, 19 Manchester St., London W.1, England, operates a clearinghouse for research and study projects in the field of mental health.

The Library of the National Bureau for Child Welfare (Voor Kinderbescherming), Stadhouderslaan 150, The Hague, publishes abstracts of articles in the field of child welfare each month. These are in Dutch, but those familiar with the Universal Decimal System would be able to understand something about the article. The subscription rate for documentation on cards is 30 guilders (approximately $8.40).

In addition to these journals and services, many professional journals in such fields as pediatrics and mental deficiency include a section of abstracts regularly or once a year. There are also a number of indexes and abstracting journals in the medical area which occasionally refer to materials in the area of child development.

CHILDREN'S BUREAU
CLEARINGHOUSE FOR RESEARCH IN CHILD LIFE
WASHINGTON, D C. 20201

If you are currently engaged in research on children or their families, we would appreciate your cooperation in providing a short summary of your work for inclusion in the next issue of *Research Relating to Children.*

The Clearinghouse is the branch of the Children's Bureau which collects and disseminates information on current research relating to children and their families. Its purpose is to make such information available to research investigators and others concerned with research in child life.

The instructions on the third page of this form will serve as a guide for your summary. You will, of course, receive a free copy of the issue in which your study appears.

If you know of others doing research which might be of interest to the Clearinghouse, please give name(s) and address(es) below:

____

____

Thank you for your cooperation.

INFORMATION SUPPLIED BY

Name ______________________________

Position ______________________________

Organization and address ____________________

____

________________ ZIP CODE __________

Form CB-200-C

Budget Bureau No. 122-R0021

SUMMARY OF RESEARCH PROJECT

TITLE:

PURPOSE:

SUBJECTS *(Sample)*:

METHODS:

FINDINGS TO DATE, IF ANY:

DATE PROJECT INITIATED:	ESTIMATED TERMINAL DATE:

PRINCIPAL INVESTIGATOR(S) ONLY:	DEGREE:	POSITION AND ORGANIZATION:

COOPERATING GROUPS *(In the research or in the funding of the research)*:

PUBLICATION REFERENCES AND/OR PLANS *(If no publication is planned, please indicate under what conditions data and results will be available)*:

IF THIS REPRESENTS WORK TOWARD AN ACADEMIC DEGREE, PLEASE STATE DEGREE *(Please do not report master's theses unless they represent work beyond a doctorate, as in dentistry)*:

INSTRUCTIONS

Please report studies in progress (or recently completed) which:

center on children or their families in such areas as child growth and development, intelligence, personality, education, social adjustment, family life, physical and emotional disorders, etc.

concern service programs in the fields of child health, child welfare, or special education

Please *DO NOT* report:

studies already reported to the Clearinghouse

purely medical studies limited to morphology or physiology, the physical aspects of etiology, epidemiology or symptomatology of diseases or handicapping conditions, surgery, chemotherapy, antibiotics or physical therapy; biochemical or other laboratory studies; animal studies

educational studies of curriculum construction or materials, teaching methods, surveys of school facilities or needs, general school administration studies

studies already published in sources generally available in major libraries across the country

demonstration projects, unless there is a formal plan for evaluation

studies of test development, standardization, or validation, except for special groups of children such as blind or retarded

regularly collected material such as annual reports, work preparatory to writing handbooks; directories; research based on secondary sources

master's theses, unless they represent work beyond a doctorate, as in dentistry

THE CHILDREN'S BUREAU
AND ITS
CLEARINGHOUSE FOR RESEARCH IN CHILD LIFE . . . .

The Children's Bureau was established in 1912 to "investigate and report. . . . upon all matters pertaining to the welfare of children and child life among all classes of our people." From this beginning, the Bureau has extended its activities into such areas as developing standards of care for children and providing funds to States to improve conditions for children. More recently, the Bureau has established several new grants programs to support research in areas of maternal and child health and child welfare.

In keeping with the basic Act establishing the Bureau, the Clearinghouse for Research in Child Life was set up in 1948. Its function is to collect information about current research relating to children in order to make such information available for the use of investigators, administrators, program planners, and practitioners.

Investigators reporting a study to the Clearinghouse receive a free copy of the issue of *Research Relating to Children* in which their study appears. A free copy of each issue is also sent to directors of research centers and to libraries. In addition, the Clearinghouse maintains a mailing list of interested persons who receive announcements of new issues as they are published. Individuals may purchase copies from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The Children's Bureau Clearinghouse routinely exchanges information with the Science Information Exchange of the Smithsonian Institution. This organization is very helpful in providing abstracts of research supported by federal funds and by many foundations. The major source of information, however, is the individual research investigator, whose help is essential in obtaining the most complete and up-to-date coverage possible.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
SOCIAL AND REHABILITATION SERVICE

Children's Bureau **Washington, D.C. 20201**

Clearinghouse, Children's-Bureau
U. S. Department of Health,
Education, and Welfare
Washington, D. C. 20201

The following investigators are doing research concerning children or services for children. Send report forms to obtain information.

Name ____________________
Address ____________________
____________________ Zip Code ________

Name ____________________
Address ____________________
____________________ Zip Code ________

Name ____________________
Address ____________________
____________________ Zip Code ________

Name ____________________
Address ____________________
____________________ Zip Code ________

Signed ____________________
____
________ Zip Code ________

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CLEARINGHOUSE PUBLICATIONS

Bibliography on the Battered Child, May 1966. Copies free from the Clearinghouse, Children's Bureau, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare, Washington, D. C. 20201.

Research Relating to Emotionally Disturbed Children, 1968. A listing of studies reported to the Clearinghouse between 1956 and 1967, including publication references. Single copies free from the Clearinghouse; also available directly from the Government Printing Office, Washington, D. C. 20402, for $1.00. Do not send money to the Clearinghouse.

Research Relating to Juvenile Delinquents, 1962 (reprinted 1966). A listing of studies reported to the Clearinghouse between 1948 and 1961, including publication references. Single copies free from the Clearinghouse; also available directly from the Government Printing Office for 35 cents. Do not send money to the Clearinghouse.

Research Relating to Mentally Retarded Children, 1966 (reprinted 1968). A listing of studies reported to the Clearinghouse between 1948 and 1965, including publication references. Single copies free from the Clearinghouse; also available directly from the Government Printing Office for 65 cents. Do not send money to the Clearinghouse.

Research Relating to Children.* An inventory of abstracts of ongoing or recently completed research studies published about every six months. Single copies of the following issue are available without charge from the Clearinghouse. (Dates indicate period during which studies were reported to us.)

Bulletin II, Supplement 4 (February-November 1955)

The following issues are available for purchase directly from the Government Printing Office, at the prices indicated. Do not send money to the Clearinghouse.

Bulletin 18 (March-December 1964) - $1.25
Bulletin 19 (January-September 1965) - $1.50
Bulletin 20 (October 1965-May 1966) - $1.25
Bulletin 21 (June 1966-April 1967) - $1.25
Bulletin 22 (May-December 1967) - $1.00
Bulletin 23 (January-August 1968) - $1.75

All issues not listed above are OUT OF PRINT but are available in many libraries.

*An investigator receives a free copy of the issue of Research Relating to Children in which his study appears. A free copy of each issue is available to libraries and research centers. The Clearinghouse also maintains a mailing list of interested persons who receive announcements of new issues as they are published.